TAMPEREEN TEKNILLINEN YLIOPISTO

MIIKKA HAAPA-AHO

CREATING A CHANGE MANAGEMENT MODEL FOR BUSINESS PROCESS IMPLEMENTATION

Master of Science Thesis

Examiner: Prof. Tuomo Peltonen
Subject approved by Faculty Council
Date: 17th August 2011

ABSTRACT

TAMPERE UNIVERSITY OF TECHNOLOGY
Master's Degree Programme in Industrial Management
HAAPA-AHO, MIIKKA: Creating a Change Management Model for Business Process Implementation
Master of Science Thesis, 87 pages, 3 Appendix pages
April 2012
Major: Production Management
Examiner: Professor Tuomo Peltonen
Keywords: Change management, Change Management Model, Process Management, Implementation Process, Implementation

Implementation of business processes, or any form of new working methods, is crucial for a company to adapt to its environment or follow its vision by realising the company strategy. Cargotec set out to unify its business processes in 2007. Unifying offering development processes was one crucial part of this. In order to succeed in the large scale global change the company wanted to study possible change management models to be used during the changes.

The research goes through process theories in order to clarify the nature of the change. Various change management models are presented and change as a phenomenon is studied from various perspectives to create a change management model that would be most suitable for Cargotec and its business process implementation. Furthermore, issues such as factors increasing the feeling of control in change, whether change can be planned and led as a process and what is the proper amount of stakeholder participation in planning and executing the changes are studied. As a conclusion a change management model reaching vertically through the organisation and incorporating flexibility is presented.

The changes are studied as a case study from the perspective of a participant observer. The findings are presented and analysed in order to see if the change management model would be applicable in similar changes in the future. The process implementation was not done according to the model in the studied organisation. That is, by managing the change systematically on every level of the organisation and establishing a sponsorship spine for efficient communication. The problems in the chosen approach were discussed with the process owner and the conclusion was that most of the problems would have been avoided by working according to the change management model. It remains to be seen how the model yields results in the upcoming change projects.

The study achieved what it was meant to. A model for managing change was created for Cargotec and through the study a powerful insight to problems emerging during process changes is gained.

TIIVISTELMÄ

TAMPEREEN TEKNILLINEN YLIOPISTO
Tuotantotalouden koulutusohjelma
HAAPA-AHO, MIIKKA: Liiketoimintaprosessien käyttöönottomallin suunnittelu
Diplomityö, 87 sivua, 3 liitesivua
Huhtikuu 2012
Pääaine: Teollisuustalous
Tarkastaja: professori Tuomo Peltonen
Avainsanat: Muutosjohtaminen, prosessijohtaminen, käyttöönottoprosessi, käyttöönotto

Jotta yritys voi mukautua ympäristössään tapahtuviin muutoksiin ja kulkea visionsa osoittamaan suuntaan, sen on kyettävä tehokkaasti ottamaan uusia strategian mukaisia liiketoimintaprosesseja käyttöön. Cargotec päätti aloittaa liiketoimintaprosessiensa yhtenäistämisen vuonna 2007. Merkittävänä osana tätä muutosta on tarjonnankehitysprosessien yhtenäistäminen. Onnistuakseen laaja-alaisessa globaalissa muutoksessa, yritys halusi tutkia erilaisia muutosjohtamisen malleja, joita muutoksen hallinnassa voitaisiin käyttää.

Tutkimus käy läpi prosessiteoriaa, jotta lukijalle käy ilmi minkälaisesta muutoksesta on kyse. Lisäksi vertaillaan useita muutosjohtamisen malleja ja tutkitaan muutosta ilmiönä monesta eri näkökulmasta, jotta voidaan luoda Cargotecin prosessimuutosten tarkoituksiin sopivin muutosjohtamisen malli. Mallin luomisen lisäksi tutkitaan miten muutoksen hallittavuutta voidaan parantaa, voidaanko muutos suunnitella ja johtaa prosessiluonteisesti sekä miten paljon eri sidosryhmiä on syytä käyttää muutosten suunnittelussa ja tekemisessä. Lopputuloksena esitellään muutosjohtamisen malli, joka ulottuu koko yrityksen hierarkian läpi ollen kuitenkin joustava.

Muutosta tutkitaan tapaustutkimuksena, osallistuvan tarkastelijan näkökulmasta. Havainnot esitellään ja analysoidaan vertaillen luotuun muutosjohtamisen malliin, jotta nähtäisiin sopiiko luotu malli tulevaisuudessa tehtäviin muutoksiin. Prosessien käyttöönottoa ei tehty luodun mallin mukaisesti tutkitussa organisaatiossa – muutosta ei hallittu järjestelmällisesti jokaisella yrityksen hierarkiatasolla, eikä tehokasta kommunikointia mahdollistavaa hierarkiarakennetta luotu. Esiin nousseista ongelmista keskusteltiin tarjonnankehitysprosessien omistajan kanssa ja tultiin tulokseen, että suurin osa ongelmista olisi vältetty jos oltaisi toimittu mallin osoittamalla tavalla. Se, miten hyvin malli auttaa muutoksen hallinnassa jää nähtäväksi tulevissa muutosprojekteissa.

Tutkimus saavutti sille asetetut tavoitteet. Cargotecille luotiin muutosjohtamisen malli ja tutkimuksen avulla saatiin arvokasta kokemusta ongelmista, joita prosessimuutokset aiheuttavat.

FOREWORD

First of all I would like to devote some fine words for my personal instructor during the writing of this thesis. Ilkka Kiiski is a life-long academic and possesses a structural way of analytical thinking that many people would envy. He has been the person that has made this thesis a possibility in the first hand. He has been also the sparring partner for me in order to make this study as academically applicable as possible while serving the company's purposes at the same time. He has had the time to tutor me in spite of his enormous workload.

From Tampere University of Technology I have had the pleasure to work with Professor Tuomo Peltonen. He has been of great help in finding relevant literature for this thesis and narrowing the scope of my study.

I would like to thank Seppo Grén who took me into Cargotec already in 2008 to work as a Spare Parts Purchasing Trainee. He has made it possible for me to succeed in my career within Cargotec by recommending me for my next job under Ismo Matinlauri's organisation. I would like to thank Ismo also and I'm looking forward to working with him again in the future. I want to thank all of the great people within Cargotec that I have had the pleasure to work with during my time in this company. The name list would be too long to publish.

The reason I rushed through my studies in the university is my big brother Tuomas Haapa-aho, M.Sc. who acted as a pacemaker for me. I had to finish my studies in a shorter time than he had and that gave me the energy I needed during my studies. No less push has come from my parents who constantly and many times annoyingly asked how I am proceeding with my studies. I want to thank all my relatives, friends and loved ones for being in my life and helped me become the person I am today. I'd like to also thank everyone in my family tree for the genetics I now possess, being able to study in a university and having the determination to finish my studies. During my time in the university many of my fellow students and childhood friends have made my days as happy as they could have possibly been.

Miikka Haapa-aho

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1. INTRODUCTION

1.1. Need for the Research

It is a well known phenomenon that the pace the world is changing is increasing (Paton & McCalman, 2008). Companies need to adapt to a vast variety of changes in their environment as well as be proactive for future needs. The sad fact is that the success in managing change doesn't correlate with the amount of change projects. McKinsey's (2006) Global Survey reports only 38 percent of change projects to be completely or mostly successful. The amount of studies made about change management is vast and the success factors alike are well known (McKinsey, 2010b). Yet, when the factors for success are well known, the success isn't easy to achieve. Thus there is a need to investigate how to achieve the success in real environment.

This thesis is written for Cargotec's purposes. Cargotec Corporation is a multinational cargo handling solutions provider. The company is going through a series of changes and this thesis focuses only on process development changes in certain locations. Cargotec consists of two major branches which are Marine and Industrial & Terminal, the latter of which is referred to as I&T further on in the text. Main brands of Cargotec are MacGregor (Marine), Hiab (I&T) and Kalmar (I&T). The Marine business area specialises in versatile cargo handling solutions applied in marine transports and the offshore industry whereas I&T provides on-road load handling solutions and cargo management solutions for ports, terminals, distribution centres and heavy industry. The mission of the company is to improve the efficiency of cargo flows. The underlying promise for customers is formed as a slogan "*We keep cargo on the move*™".

MacGregor solutions are aimed at maritime transportation and offshore industries. Maritime products include onboard cranes, hatch covers, RoRo (Roll-on/Roll-off) and cargo lashing equipment as well as bulk handling and off-shore load handling solutions. MacGregor also provides ports with link-spans and bulk-handling equipment. The offering of Hiab consists of loader cranes, forestry and recycling cranes, demountable systems, tail lifts and truck-mounted forklifts. Kalmar develops and sells ship-to-shore cranes, yard cranes, shuttle and straddle carriers, reach stackers and empty container handlers mainly for port use. Its forklift trucks and log stackers are most commonly used in heavy industry and terminal tractors are used in distribution and logistics centres.

Formerly the corporation has been a cluster of almost individual and autocratic companies which is no wonder when looking at the history of the company (Figure 1.1).

Thus, in 2007 Cargotec started One Company initiative aiming at unifying the company structure, processes and integrating some of its functions. The initiative is a massive change effort affecting the whole company. It is meant to take advantage of the resources the company already has and transform the fragmented organisation into a united corporation. It can fundamentally be seen as a move from a holding company owning three unique companies to one company. One Company initiative is described in Cargotec Glossary as follows: "*Cargotec's way of working together as one entity benefitting from its diverse knowledge and scale and operating with combined resources in the interest of our customers*."

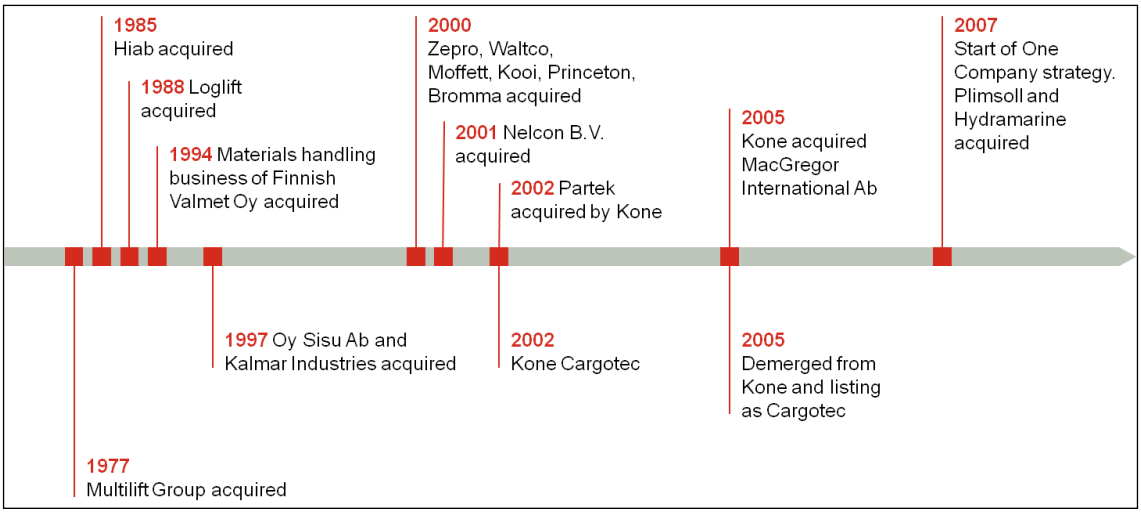

Figure 1.1: Cargotec's history from 1970's to this day

As Cargotec Corporation has been formed through a series of mergers and acquisitions, there have been a myriad of different ways of working, processes which have not always been clear and visible. The Process Development Initiative, launched in August 2009, aims at finding the best practise inside the company for identified processes. The initiative is a means to break ground for corporation-wide development of these processes in the future. Developing common processes is an integral part of One Company initiative and highly supported and driven by the company CEO and the executive board.

This thesis handles only a part of the Process Development Initiative (PDI) and changes that are to be made in the organisation. The need for change stems from strategic decision made in 2010 to develop internal clarity (Figure 1.2). The most crucial starting point for new business process implementation was decided to be I&T since there was a stronger need for internal clarity. I&T has been recently formed through merger of Kalmar and Hiab thus having variety of subcultures. Even the two companies themselves have been constructed through mergers and acquisitions. In the merger of I&T the organisation was heavily restructured. Similar parts were combined and an RDE (Research, Development and Engineering) organisation was formed. The reason for it was to effectively exploit resources, to increase transparency, and to enhance

competence development with cross-organisational co-operation. There was also urgent need for efficient project portfolio management in order to see the impact of investments for the future of the company, holistically.

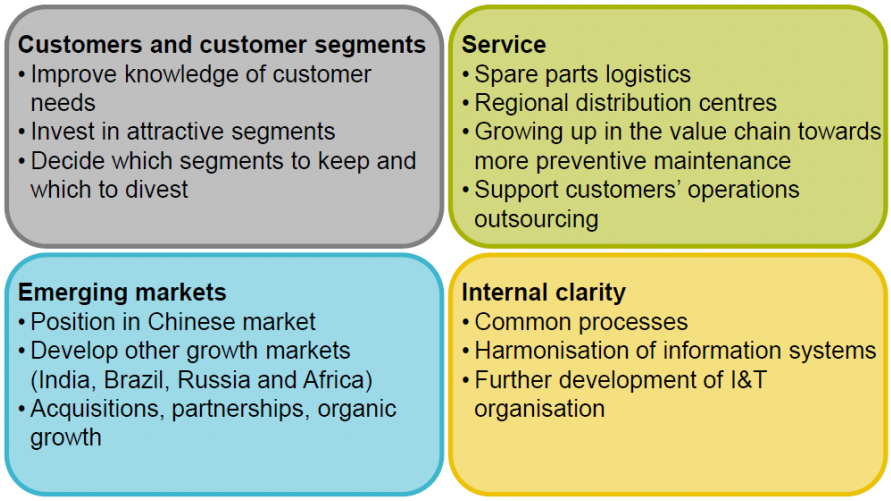

Figure 1.2: Cargotec strategic focus areas for 2011-2015

I&T's product management and development organisation starts the changes by implementing new processes for current product care, new product development, future offering and concept development. Steering these new processes later on a portfolio management process is implemented. The portfolio management implementation is out of the schedule and scope of this thesis.

Process Development Initiative is not a simple task. Not only is the PDI devoting to unifying the processes in order to gain efficiency but as well aligning the processes with the business operating model. Processes can be seen as means for transferring the mindset of the leaders to different parts of the organisation (Figure 1.3). After unifying the processes what is left is the implementation of them. The organisation and its structures need to change in order to adopt the new processes. The magnitude of change is different along the organisation. Others are really close of working according to the new processes and other parts need serious overhaul before achieving the same level. The processes, after all need to be taken into use in all parts of the organisation. In practice, some specific parts of the organisation can't form themselves around the processes completely. That means, some exceptions are allowed. The processes have been carefully designed with lots of stake holding personnel included. Before the decision of implementation the processes are thoroughly validated.

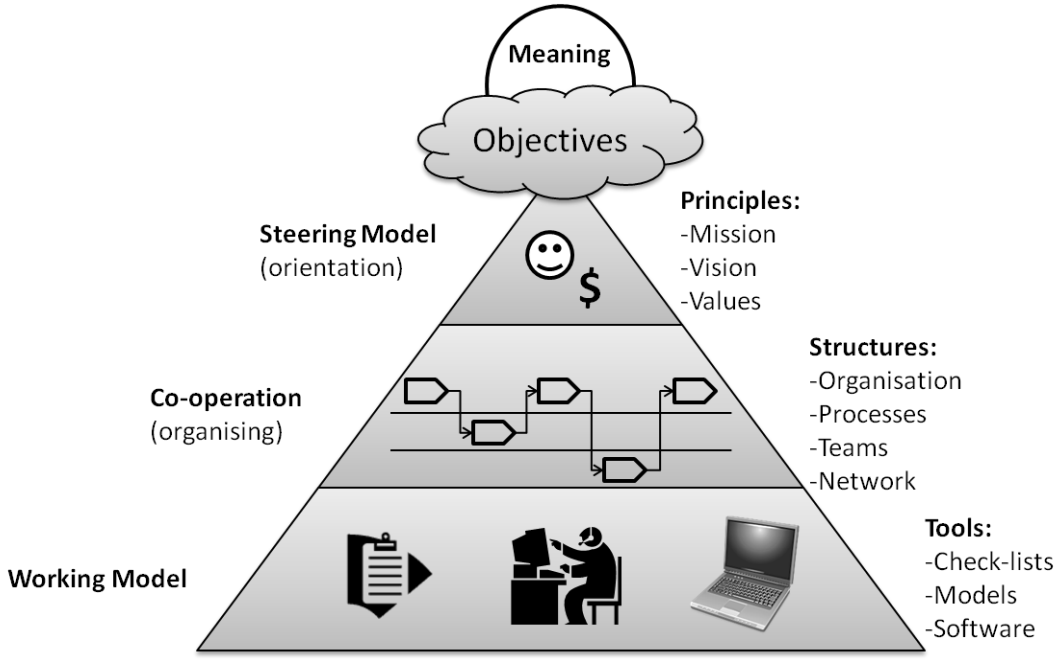

Figure 1.3: Processes as a means for transferring the mindset of management to action in works (Laamanen, 2001, p. 37)

Laamanen (2001) describes the functional framework of an organisation consisting of three layers. The functional framework helps the organisation achieve its objectives. The steering model states organisation's direction, what is its purpose and where it wants to go. This model is based on the assumption that the success of a company is the end-result of effective co-operation. The processes are the means of creating effective co-operation through networking and self-directed teams. (Laamanen, 2001, pp. 35-37) The basic idea behind the process initiative in Cargotec is to achieve such success and broad base of improvement ideas through common way of working.

McKinsey Global Survey (2010b) has focused on successful transformations and found out clear entities that ensure success in change initiatives. It is in Cargotec's interest to study the right procedures to achieve the best result possible, in budget and in time. McKinsey Global Survey's (2010b) propositions are to have clear but ambitious targets, having a clear structure in terms of people participating in the change, maintaining energy and involvement throughout the organisation and supporting all with great leadership. What these are in practice is to be addressed to later on.

1.2. Scope of the Research

The change, that this thesis studies, happens in I&T's product management and development organisation. The idea is to study the phenomena around change and thus be able to create and test an applicable process for managers responsible of change to help handle all types of changes in their organisations. The process should consider the differences of understanding the change on each level of organisation. That is, levels the changes will have some effect on. Thus the research covers all organisational levels

from senior management to performers. The process should assist in taking into account all relevant stakeholders, structures and characteristics connected to the change. Any tools needed for handling the change are not in the scope of this research. The idea is to gain understanding of how change can be diffused into the organisation. The thesis focuses on the early phases of implementation program in product management and development organisation. Aim is to gain enough knowledge of change management so that the process created during the research can be used in further change initiatives.

Idea for the research came from the company executives. It was an iterative process of first understanding the main question and then proceeding into splitting it in clear and unambiguous research entities. Refining the research questions was done with the help of the research instructor, who is also in charge of the change initiative in product management and development organisation. The main theories the research was to cover were process management and change management. The company is unifying its processes and implementing the results into action globally and is in need of relatively easily adoptable process of change management. The research questions were addressed to and refined during different phases of the research. The focus of the research was rather vague to start with and at some phase the intention was to study the implementation on a local level - the changes in the end users' level. Further on it was noticed that the need for the research is at the project level which includes all organisational levels from senior management to end users. The research questions were decided to be:

- What is needed from the change process in order to handle the change systematically taking into account the relevant structures and stakeholders around the change?
- How to improve the feeling of control over change?
- How much different stakeholder groups should be included in planning the change and why?
- Can the change be planned and led as a process?

The first research question is to gain understanding of the thoughts and needs of a change manager when he or she is announced to be leading the change. For handling the change situation the leader needs to have presumably clear understanding of the setting the change is happening in. That is, to know of the structures and stakeholders affected by the change. In order to lead the change, the manager needs to have a feeling of control over the situation. The factors affecting the personnel's feelings in change are therefore of the company's interest. Since one major part of the change is people, the needs of them should be answered somehow during the change (Paton & McCalman, 2008; Green, 2007; Burnes, 2001). The study takes on to understand the individual needs in change, for the change manager to be able to answer them. Since the company is moving to unified processes, there is also a need to study whether the change initiative can be led as one.

The research happens during the process implementation project. This thesis doesn't dig into the process development tasks done prior to implementation. The intent of the research is to find out whether the business process implementation can be led as a systematic, repeatable process and what is needed from the process in order to help change leader manage the change situation not forgetting about the needs of relevant stakeholder groups, and achieving successful change.

1.3. Research Approach and Strategy

As Saunders et al. (2003, p. 83) point out in their book about research methods, the process of research consists of five different layers which all need to be discussed in order to make a good research paper. Research philosophy, the first layer, refers to what is thought about the development of knowledge. After understanding the philosophy, the approach to theory needs to be addressed whether it is created or tested during the research. The strategy of the research is then created. That is, how to answer to the research questions. The time horizons thereafter, affect how the situation is perceived. It can be a snapshot of the situation or a longitudinal, diarylike presentation. The last layer is data gathering. (Saunders et al., 2003) Data gathering is further addressed to in chapter four that introduces the research method.

Research paradigm, whatever chosen, is a set of beliefs, values and assumptions about nature and conduct of research. There are two major paradigms in research, those being qualitative and quantitative. Some researchers are entirely purist about their views meaning not even parts of the beliefs, values and assumptions should be mixed. Then there are researchers who speak for mixed method research. (Johnson & Onwuegbuzie, 2004) This thesis, in terms of its paradigms, is a mixed method research. The study is practically a qualitative research even though there are two units of analysis. The research is approached through realism. Its ontological view of reality is that reality can be only imperfectly and probabilistically apprehended but it is seen as true. Epistemology in realism sees findings as probably true but without scientifically proofed certainty. (Healy & Perry, 2000, p. 119) The findings of this study couldn't be completely scientifically tested during the research. But as March & Smith (1995, p. 253) have stated, operations research and management science claim themselves to be sciences while being only heavily prescriptive.

Research is conducted as design science by building and evaluating a change management model suitable for the specific context and later on theorising and possibly justifying the model with case study. This is to address what Osterwalder (2004, p. 4) has stated in his thesis as the reasoning for business model research and design science: it is not for understanding of a phenomenon but to find a solution to a problem. Compared to natural sciences, design science attempts to create things that serve human purposes rather than trying to understand reality. (March & Smith, 1995, p. 253) Business model research tries to express the former business logic in a different light

and formalise a new one. (Osterwalder, 2004) Design science has four main research activities: build, evaluate, theorise and justify (March & Smith, 1995, p. 255). Design science is technology oriented (March & Smith, 1995, p. 253) but in this thesis it is tried to be used for justifying a change management model. Design science can be used for other kinds of research as well, not only for Information Systems research (Winter, 2008, p. 470). Design science is further explained in the research method chapter together with the case study methods.

The intention is to conduct a longitudinal case study during the implementation project in product management and development organisation. It starts with the design of the implementation and ends when changes in Tampere have been started. The reason for selecting case study as the method is Yin's (2009, p. 4) suggestion to conduct case studies in situations where there is need to understand complex social phenomena. He also states that case study is preferred in examining contemporary events where the researcher is not able to affect the situation (Yin, 2009, p. 11). Case study should cover four distinct entities, those being design, data collection, analysis and reporting (Yin, 2009, p. 4). Before conducting the case study two of design science's phases will be done. The model for managing change will be built and evaluated. Building phase constructs the model and shows that such a model can be created. Evaluation phase develops the criteria with which to test the performance. Throughout the case study the model will be theorised and justified through analysis if possible. Theorising aims to link the reality to theories to understand how or why a model works or not. Justifying phase gathers evidence for or against the model and theories. (March & Smith, 1995, p. 258)

The business process implementation in product management and development organisation starts in January 2011 and there has also been a lot done prior to this study. The research in process implementation starts in September 2010 and is due to end in July 2011. The case study starts as an exploratory attempt. It is to first introduce what the history of the situation is and what is about to happen. After gaining insight of the events it takes a descriptive stand. Descriptive study is about describing the situation as accurately as possible. After the exploratory and descriptive phases the case study refines through analysis into an explanatory study. That is, it addresses the relationships between variables that are studied. (Saunders et al., 2003, pp. 97-98) Through design scientific research a model for change management is created and it serves as the base for analysis in case study. Reliability, validity and generalisability of the case study findings are addressed in research methods and material chapter.

Before stepping into the actual research, the theory needs to be reviewed. In fact, part of the research is a literature review. The literature mainly covers subjects of change management and process management. All of the literature sources are secondary sources, that is, books, journals and internet sources. Change management literature only covers work of organisational change. After all, that is what this study focuses on.

Understanding the process thinking and methods related to it is important on two levels. On the one hand, what is to be changed in the company are processes and they need to be understood, but on the other hand, there is also need to study the implementation, or the change, as a process.

1.4. Outline of the Thesis

The thesis follows very typical framework for Business and Technology Management studies (Figure 1.4). First the theory and concepts needed in the study are reviewed. After understanding the theories behind the research, the empirical part of the study follows.

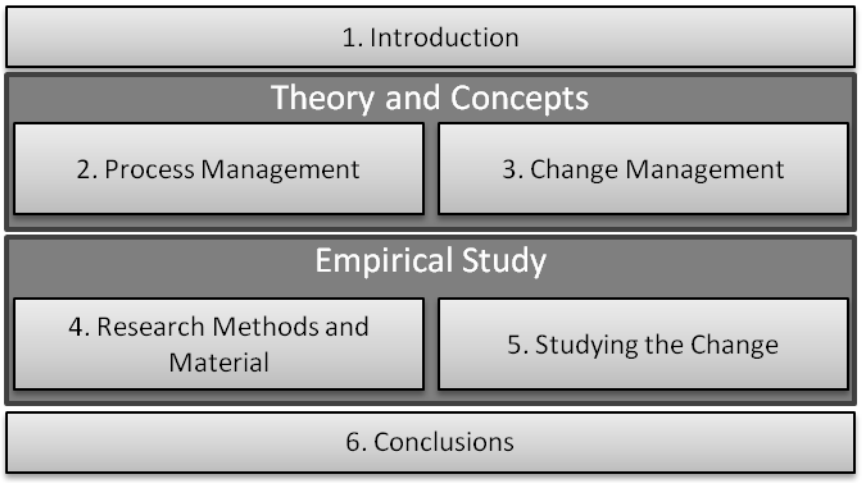

Figure 1.4: Outline of the thesis

Theory and concepts part of the study consists of literature review of organisational change management and business process management. Organisational change management is referred to as just change management further on. In addition, business process management is shortened plainly to process management. First, the subject of process management is introduced. After learning what the processes are, how they are managed and improved and what is needed in order to succeed in implementing processes, the actual change management is investigated. The change management part covers different types of organisational change and on what levels the change has an effect. It also studies different approaches to change and compares models found in literature trying to find the most appropriate approach and methods for change management.

The empirical study part of the thesis explains how the research questions are to be answered and what are the results of the study. The research methods and material chapter explains how the research is designed, sheds light on the reasons behind the choices and addresses how the data for the research is to be gathered. Chapter five is a transcript of records that are done during the action research and case study. It also presents the situation in the beginning and how the change is started. The findings of the

research are also presented in chapter five. Furthermore, validity and reliability are once again addressed and the study is compared to previous studies and theoretical foundations. The thesis ends in conclusions which reflect the importance of this study. In addition, possible limitations of the findings and further research suggestions are presented.

2. PROCESS MANAGEMENT

2.1. Understanding Process Management

The word process can be defined rather broadly. Every change, a transition, from one state to another is a process. For example, changes, development, learning, gaining understanding and growing up are processes. In addition, any action can be described as process. (Laamanen, 2001, p. 19) There are two meanings for processes in this thesis. Processes that are implemented in product management and development organisation are business processes. The change in those organisations from current state to the desired future state is a process itself. The change is managed through a business process approach. Mostly when the word *process* is mentioned in this thesis it is to describe a business process. Palmberg (2009) has conducted a thorough review of process management literature. Her work is a good basis for determining different descriptions of process management. She has formed a clear structure highlighting the entities found in literature (figure 2.1). The process definition differs from author to author. Majority of the definitions has six components: *Input and output, interrelated activities, horizontality (cross-functionality), purpose or value for customer, use of resources* and *repeatability*. Drawing on these components, a comprehensive definition of process includes them all. (Palmberg, 2009, p. 207)

Process management has its roots on the shop-floor level. First it concentrated on efficacy of sets of action on the shop floor but has since grown into an enterprise management strategy. (Gulledge & Sommer, 2002, p. 364) There seems to be growing interest in process orientation in many enterprises. Both practitioners and scholars are interested in how to best manage value creating flows of activities in organisations. Processes can be categorised based on their nature. Strategic processes are means of supervising and controlling the whole organisation. Operational processes are more traditional, meaning for example logistics or production processes. Supportive processes are for assisting the operational processes. There is a hierarchy, as can be seen, in the categorisation. The same hierarchy is used in identifying the main process, its sub-process, activities of the sub-process and task to perform the activities. (Palmberg, 2009) The basis for managing an organisation through processes is to know what kind of business processes are performed in the organisation and how they are related to one another. (Kohlbacher, 2010, p. 136) Process thinking is also used for binding the organisation together by removing barriers between functional groups. (Palmberg, 2010, p. 95) Hammer (2007, p. 3) claims that if employees don't understand how the processes work as a whole, they aren't able to make decisions that are in the best interest of the process.

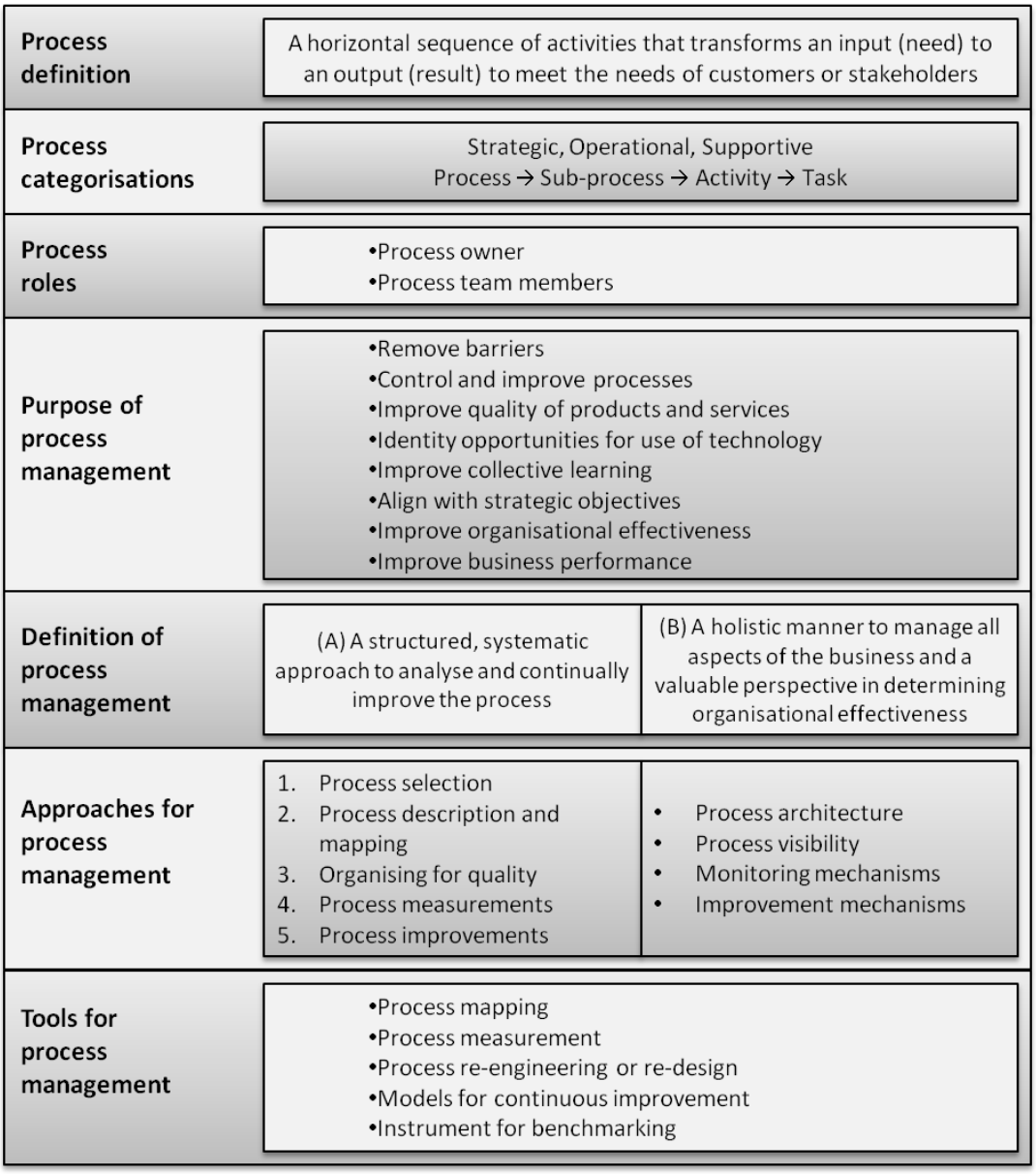

Figure 2.1: Process management descriptions (Palmberg, 2009, p. 204)

Palmberg (2009) has found two distinct categories of roles used typically in literature. Process owner is the person responsible for the continuous improvement of processes and supervision that process meets its purpose, the only one to have authority to approve changes. Members then are the people who form the cross-functional process team. They make the process action but are on the other hand also responsible for spotting deficiencies from the process. (Palmberg, 2009, p. 209) Roles are what link people into the process. Through the role, the person knows what his duties are in the process. It must not be mixed up with job descriptions though. Individuals can have multiple roles in process oriented organisations. (Laamanen, 2001, p. 122) The role of process owner is the most distinct feature that differentiates a process oriented organisation from traditional ones. (Kohlbacher, 2010, p. 136) The roles are a crucial point in process governance. Governance is needed for appropriate and transparent

accountability. Decision making, meaning who makes which decisions, should be predefined. That calls for roles in the process on which the responsibilities are built. Roles are also needed for defining correct measures. Through measuring, the governing party is able to decide on improvements, and that calls for standards of how the processes are improved. (Rosemann & vom Brocke, 2010, p. 116)

Process management approach is typically applied for a variety of reasons. (Kohlbacher, 2010) Companies of all sizes have achieved improvements in cost, quality, speed and profitability, to name a few, by improving internal and customer-facing processes. (Hammer, 2007) By adopting the concepts of business processes a company can remove barriers between departments. Understanding the connections between different departments, the employees get a broader view of organisation, can become multi-skilled and respect the work done by colleagues. (Laamanen, 2001, p. 23) Processes need to be distinguished from practice. Processes are an interpretation of explicit knowledge and routines whereas practice is typically intangible and consists of tacit knowledge. The information in processes can be codified but the case isn't so when talking about practices that are performed. Nevertheless, when the processes can be codified, that is, they are distinct features, supporting structures such as software can be identified. (Lock Lee, 2005) The supporting structures are for guiding the actions in an organisation. The processes are for doing the actual purpose the organisation is set to do. Through processes the organisation is able to link the action with the big picture including mission, vision and values. (Laamanen, 2001, p. 36) Strategic alignment is also stated as one of process management's core concepts in Rosemann & vom Brocke's (2010, p. 112) study. They state that processes need to be designed, executed, managed and measured according to strategic goals.

Antonucci & Goeke (2011) claim, that there is no universally accepted definition of process management since it incorporates a vast amount of disciplines. They have included components of Lean Management, Total Quality Management and even Information Technology into the concept of business process management. (Antonucci & Goeke, 2011, p. 128) Palmberg (2009) has thus defined business process management in two different ways after analysing vast amount of literature. On one hand it can be about improving the processes through systematic, analytical approach but on the other hand process management can be for controlling the business as a whole through processes. (Palmberg, 2009, p. 209) In the case of Cargotec it is mainly about the latter definition - to supervise the organisation's actions in order to gain efficacy and create transparency.

The approach to process management depends on the definition of it. If process management is described as a systematic set of actions aimed at streamlining the processes the approach is naturally more detail-driven. If the basis for process management is to better steer the organisation the approach is more about visualising the actions made in the organisation in order to manage it more holistically. (Palmberg,

2009, p. 211) This seems to be a division into two different levels of thinking. The latter clearly includes the former but isn't as thoroughly and in detail described. Laamanen (2001) has seen both approaches as equally important and included them in his book. Processes are on one hand about understanding the peculiarities of actions inside an organisation but on the other hand they form a network of interlinked parts. Understanding them both, transparency increases and organisation can be directed towards its goals. (Laamanen, 2001, pp. 36-37)

The tools Palmberg (2009) has shortlisted (Figure 2.1) are for a company to function according to process orientation. The first phase is to design and document the processes. Organisation needs to know the business processes that are performed and how they connect with each other (Kohlbacher, 2010). Through identification of key-processes the organisation is able to map them. The hardest part is to actually get the organisation to work according to the mapped processes. (Laamanen, 2001, p. 50) Hammer (2007) too uses words of caution when talking about process re-design and going towards process orientation, that it isn't an easy task. The network of processes and their connections are usually so vast that even though when an organisation has seemingly mapped its internal world, a lot is yet unknown. What tasks are done, where and in which order? Process based changes are extremely difficult to achieve. (Hammer, 2007, p. 1) Laamanen (2001, p. 41) answers this in his view that process thinking can be achieved by organisation slowly and gradually learning it. If a company wants to act according to processes it needs to become process oriented. Process orientation can be tested quite simply by asking a few questions. If a problem arises, do people blame one another or try to look for the problem in the process? Are people who use the process able to fix the problem by using process improvement tools? If someone is blamed or the people are unable to fix the process themselves, a company isn't fully process oriented. (Madison, 2005, p. 11)

Re-engineering is a single project aimed at radical transformation of processes. Kohlbacher (2010) states that the typical problem in re-engineering is that it treats processes as individual "islands" with no interconnectedness. Rarely the literature even handles how the processes are managed after designing. (Kohlbacher, 2010, p. 136) It is nevertheless a component of complete process management approach. Al-Mashari & Zairi (1999) for example have presented a complete toolkit for business process re-engineering and implementation which takes into account the integration and management aspects. Thus, Kohlbacher's (2010) view can be deemed a biased one. It is also mentioned by Lee & Ahn (2008, p. 270) that if re-design is endeavoured too eagerly, it can end up in neglecting effects it has on organisation as a whole. Hammer (2007) claims that in many cases radical re-design is the only way to increase performance radically. It is true that organisations usually use tools such as Six Sigma or Total Quality Management to supervise that its processes are done according to specifications and developed further but radical improvements need re-designing. (Hammer, 2007, p. 2) Näslund (2008) warns though that western companies are eager to

adopt new management fads that actually differ very little of the previous models. The need for re-design thus should be carefully analysed, especially if the organisation already works according to processes.

Rosemann & vom Brocke (2010) see process control and measurement as base for continuous development and innovation on process level. They divide the control mechanisms into two entities: process control (risks for example) and performance measures (such as time, cost and quality). (Rosemann & vom Brocke, 2010, p. 117) Continuous development can be described as one of the core concepts in process management. Processes go through a series of stages ranging from chaos to being the best in the world. The aim should always be to have the best process in the world. (Laamanen, 2001, p. 44) Improvements typically try to reduce variation or waste in the process so that the results of the process can be achieved with fewer resources (Pacicco et al., 2010, p. 92). This view corresponds heavily to Lean management, which tries to eliminate all waste in the value stream (that is, the process) (Womack & Jones, 2003). Improvement and innovation should take into account the whole process, meaning that changes should support previous and further steps in the process. It is about improving the process as a whole, coming up with a completely new approach to the problem or using the existing resources more efficiently. (Rosemann & vom Brocke, 2010, p. 117)

Process management approach has its opponents also. Senior executives sometimes feel that they lose their power when adopting process orientation. (Palmberg, 2010; Laamanen, 2001) Gulledge & Sommer (2002) state that management with business processes is an all or nothing proposition. Hierarchical management structure and process thinking can't function together. (Gulledge & Sommer, 2002, p. 368) People in general play a crucial role in adopting processes. It is not only the buy-in that can hinder the adoption but it can be slowed down by insufficient skills and expertise, process management knowledge, process collaboration and communication and leadership. (Rosemann & vom Brocke, 2010, p. 119) These factors must be addressed to before an organisation is able to adopt process orientation. Hammer (2007) has noticed the same prerequisites and introduced a toolkit for evaluating the maturity of an enterprise and its processes (appendix 1). The toolkit is used for forced conversation of problems that occur. It is also for finding out why the processes won't function in the way they are meant to in the first place. The toolkit differs from other related tools in that it is designed to be universal, not for a specific industry or process. (Hammer, 2007)

But, before going too deep into the process development or management it is important to take a look at how processes and the roles within them are identified in the first place. Through identifying and mapping, the processes can be further developed and made to work.

2.2. Identifying Processes and Roles

As Kohlbacher (2010) has written, an organisation must know what kind of business processes are handled within and outside the organisation and how they relate to one another if it is about to adopt process management. The work starts with identifying key-processes within the organisation. Often organisations determine really important structural aspects of processes such as the start and end of them, classification, nomenclature and elements to be described early on without paying enough attention to these decisions. It is thus suggested that these aspects should be discussed and analysed early in the process identification. (Laamanen, 2001, p. 52)

First the start and the end of the process need to be addressed to. This includes determining the customers of, the output of and the inputs for the process and inspecting its suppliers. These form the basis for development and management of processes. The guiding principle is that a process should start from and end at the customer. (Laamanen, 2001, p. 52) Once the key-processes are identified, typically organisations start mapping the as-is -situation. That is, how the organisation works right now. That works as the basis for designing the to-be -state which is how the organisation wants to operate. (Pacicco et al., 2010; Rosemann & vom Brocke, 2010) In business process re-engineering the method is somewhat different. It should start with a blank paper, with no previous assumptions how the process should work and develop an ideal process on theoretical level. That serves as a basis for radical improvements. (Aldowaisan & Gaafar, 1999, p. 515)

There are various methods for mapping processes. (Pacicco et al., 2010, p. 94) The principle for mapping is to identify relationships between roles, responsibilities, data and objects in a process that creates an output and make a visual representation for easier examination. (Biazzo, 2002, p. 42) The visual presentation includes all the critical components of the process. It helps understand the interconnections and one's own significance in achieving the output. Thus it assists in embarking upon teamwork. (Laamanen, 2001, p. 76) It is also important to assign the points of decisions into the process map. (Greasley, 2006, p. 98)The mapping itself isn't sufficient as was described above. Process maps can be used for organisational analysis. It is only through organisational analysis that the company is able to link the tasks, structures, people and technology. (Biazzo, 2002, p. 46) All in all, it is important for a company to visualise the workflow in order to analyse the efficacy of the as-is -situation and develop a streamlined process to be used and further developed in the future.

Laamanen (2001) has introduced three methods to start identifying processes: *analysing operations, analysing factors for success* and *analysing the processes of customer.* Analysing operations focuses on functions that perform tasks within an organisation. This approach is fundamentally wrong. Typically the improvements achieved with this kind of approach aren't too radical. The problem usually isn't in the work done within a

part of an organisation. The author sees that the best approach would be through analysing success factors. The problem in this approach is the abstract nature of success factors. The easiest approach which gives relatively good results, the author claims, is through analysing customers' processes. The purpose of the organisation is to serve the customer in the best way possible and that can only be done by identifying the customer's processes. (Laamanen, 2001, pp. 64-65) The customer can be internal or external.

Aldowaisan & Gaafar (1999) suggest that to be able to map the roles of personnel, an employee type vs. activity matrix has to be developed. It is further suggested that in process organisations single employee is responsible of role's activities throughout the whole process. (Aldowaisan & Gaafar, 1999, pp. 518-519) There's a need to differentiate the function and the process. Organisations should be wary not to reorganise themselves according to the processes. Doing that, processes don't do what they are supposed to. That is, break the barriers of functional organisation. (Laamanen, 2001, p. 59) As was said earlier, in a process organisation it isn't always the same part of organisation that acts in a distinct role in a process. The one who will take upon the role is determined of the skills that are needed (Laamanen, 2001, p. 122). By going through the process asking questions from employees in different functions and mapping the process based on the review suits traditional culture but doesn't help solving prevailing problems and gaining cross-functional perspective. It is suggested that people who do the actual work that is being mapped are brought into a shared space to discuss their work and the problems that are present. This is done for better buy-in for the changes to come and for people to better understand the cross-functionality of their work. (Madison, 2005, p. 18)

Madison (2005) presents three levels of process mapping: *Macro, functional-activity* and *task-procedure* flowcharts. This differentiates the level of detail used in mapping. It is not to say that macro-level mapping would always be easy. Usually every level of mapping incorporates different opinions from different parts of organisation. These should be discussed. *Macro* level flowchart is for mapping the rough picture, that is, main elements of work when transforming an input to an output. It defines the scope of the process but isn't detailed enough to spot problems. *Functional-activity* level chart identifies the roles, job titles (not departmental job titles), and activities done by these roles. This level of mapping is good for finding out where most of the job is done, who adds and who doesn't add value to the process, where the problems in handoffs are, etc. These activities can be then broken down to *task-procedure* flowcharts. This level of inspection handles individual tasks that are done in the activity. This level is used for a checklist type of purposes. It is too detailed comparing to *functional-activity* level to be used for spotting problems in the process. (Madison, 2005) The *task-procedure* level of detail isn't always even necessary according to Laamanen (2001). There seems to be differences among people of how detailed a process map they can cope with. Others understand the big picture through details, and some go the other way around.

(Laamanen, (2001, p. 81) Madison's (2005) classification has one less levels in comparison to Palmberg's (2009) categories of processes. Though, the sub-process level can be categorised as a *macro*-level flowchart.

After mapping the processes on different levels, they need to be evaluated, tested and validated before implementing. Evaluation is meant for personnel to understand and accept the process. It is suggested that to be able to understand and accept, the personnel need to participate in process design through analysing it and giving feedback - having an opportunity to affect the process. The validation should cover four features. First, the process's description has to be technically valid. That covers for example terms, logicality, compliance with quality systems and information management. This validation should be done by the process management group. Second, general management group validates the process in terms of its applicability to organisations principles and strategy. Also the roles, responsibilities, authorities and resources needed are checked. Third, personnel in crucial roles in the process need to validate that the process covers the critical needs of business. The last, fourth, phase is for the actual doers, roles, in the process to go through the process and understand the big picture and their own contribution for the process. (Laamanen, 2001, pp. 69-104)

2.3. Making Processes Work

The first thing an organisation should check before implementing processes is the maturity of the enterprise to even work according to processes. Hammer (2007, p. 7) suggests that organisation needs to develop or posses capabilities in *leadership*, *culture*, *expertise* and *governance*. The readiness, whether or not the organisation possesses these capabilities, can be tested with the matrix-form analysis that is presented in the (appendix 2). (Hammer, 2007) Rosemann & vom Brocke (2010) have listed six core elements that are key success factors when applying business process management practices. The core elements are *strategic alignment, governance, methods, information technology, people* and *culture* (Rosemann & vom Brocke, 2010, p. 112). This is all to say that a company needs some prerequisites before being able to implement processes. Hammer (2007) goes as far as to say that unless all these capabilities are in place, institutionalising and sustaining the performance of processes is short lived. When an organisation achieves process orientation, the results seem to be in almost all cases positive (Kohlbacher, 2010).

Lock Lee (2005, p. 32) has introduced eight functions needed in process management:

1) Discovery: Finding out how things are done in an organisation
2) Design: modelling, simulating and re-designing processes
3) Deployment: distributing the processes to relevant parties
4) Execution: making sure the organisation works according to processes
5) Maintenance: resolving issues and adapting

6) Interaction: allowing human interaction with the processes
7) Optimisation: improving the processes
8) Analysis: measuring performance and planning improvements

These are all performed continuously in a process oriented organisation. We have handled some of these already in this thesis. But it is worth going through them one by one since they contribute heavily on the efficacy of the process orientation. The three first functions are done early on in the lifetime of a process. Nevertheless, discovering and designing the processes is important for an organisation (Kohlbacher, 2010, p. 136). Deploying the processes isn't always an easy task (Hammer, 2007, p. 1). It needs to be determined though, who will work according to the process. Organisations are eager to share best practices, but are often confronted with "not invented here" and "our business is different" type of barriers. The challenge is to determine if the practices that are modelled into the process are truly transferrable. (Lock Lee, 2005) Deployment can be helped with process simulation and validation. (Greasley, 2006, p. 96) Nevertheless, achieving the new way of working needs change management. (Laamanen, 2001, p. 256) Ensuring the organisation works according to the processes, the process owner needs to have active stand, especially in the beginning of the process's lifetime. If process needs adjustment, it should be brought into attention of the steering group by process owner. Personnel working in the process need personal development plans that support the process way of working. The mid-level managers, which work in the process, need to actively identify deviations in the tasks and make corrections or suggestions for corrections. (Laamanen, 2001, pp. 107-108)

When, eventually, the process orientation is achieved, maintaining the performance is another issue. Processes need continuous improvement. Improvement calls for metrics. The performance of the process needs to be measured, and through measuring the need for improvements can be found. (Hammer, 2007) A typical problem with measuring processes is parting from traditional measures of functional organisation and starting to measure the performance of the processes (Hammer, 2007; Laamanen, 2001). This is a part of the readiness of enterprise to employ process thinking. Laamanen (2001), when talking about process improvements, makes a clear distinction between improvements and mere changes. Changes can go in either direction, good or bad, whereas improvements have only one direction. Thus changes should always be undertaken with improvements clearly in mind. The author suggests that every improvement should have at least three criteria: it can be presented with a number; it has a measurement unit and the goal is attached to time. For improvement, it is crucial that the process has been mapped thoroughly and it can be, and is, measured. Then the focus is shifted to individual parts of the process. Through analysing the measures, different parts of the process can be identified as inefficient. Efficacy then is assessed with improvement actions. (Laamanen, 2001)

Human interaction is among the main things in process management (Lock Lee, 2005, p. 32). Laamanen (2001, pp. 100-104) states that even in design phase the users, managers and steering group of the process need to validate and have an impact on process. For business process management to be efficient, the personnel need to be aware of firm-specific processes (Antonucci & Goeke, 2011, p. 130), process improvement techniques (Hammer, 2007, p. 3), and the culture of the organisation has to support continuous process-based change (Rosemann & vom Brocke, 2010, p. 119). The power to make changes that aim for improvements has to be also determined. Process teams that have skills and knowledge on process measuring and improvement have little room for traditional supervisors. (Hammer & Stanton, 1999) This is one of the reasons why senior management typically resists change to process oriented organisation (Laamanen, 2001). For human interaction and process optimisation the personnel needs to possess skills in process improvement. (Rosemann & vom Brocke, 2010, p. 113)

One of the common topics in business process management literature is the use of information technology. It is listed as a critical success factor in Trkman's (2010) study and is a core element in Rosemann & vom Brocke's (2010, p. 112) presentation. Trkman (2010, p. 126) has presented that information technology should be used only when it fits perfectly with the process it is meant to support. There are various stages where information technology can play a distinct role. It starts with the modelling stage, where visualisation tools may be used. Information technology can be used in implementation and execution phase. Execution especially includes document management systems and other process-aware tools. Processes may be measured and controlled with IT-tools, such as balanced scorecard systems. (Rosemann & vom Brocke, 2010, p. 118) In early stages of information technology and business process management, there were off-the-shelf tools that did indeed standardise the way of working but weren't necessarily suitable for the organisation's actions. One of the biggest contributions of information technology is that the processes can be spread from supplier to customer. (Lock Lee, 2005, p. 32) The problem with IT-system investments seems to be the complex nature of the costs and benefits. The needs for the system are specific for company and environment but its benefits are usually measurable on task or activity level. (Trkman, 2010)

Processes of an organisation should be aligned with its strategy. (Rosemann & vom Brocke, 2010; Trkman, 2010; Laamanen, 2001) Strategic alignment directs process improvements and helps determine how processes support overall strategy. By determining the enterprise process architecture the value chain of the organisation can be visualised. This visualisation serves as a basis for further process improvement analysis and determines the value-adding activities. Process outputs determine the KPIs of an organisation, and as far as possible the KPIs should be standardised across the processes - especially between different locations. (Rosemann & vom Brocke, 2010, p. 115) The strategy is linked to processes through the KPIs. They determine the process's

key-performance and strategically important factors, such as for example customer satisfaction. By acting according to the processes, organisation carries out its strategy. When strategy is changed, processes need adaptation. (Laamanen, 2001, pp. 249-252)

Rosemann & vom Brocke (2010, p. 112) have listed process governance as one of the core elements in process management. We have already covered briefly all the other factors, meaning strategic alignment of the processes; design, execution, improvement and maintenance methods; information technology; skills and capabilities of employees and organisation culture. They all contribute to the success of process management. Process governance means accountability in terms of roles and responsibilities in the process and further on the decision-making authority considering the process metrics and improvements. (Rosemann & vom Brocke, 2010) The governance contains roles as do the processes. Laamanen (2001) identifies five roles, which are process owner, manager, business-unit manager, process-users and director. They all perform three main tasks on behalf of their role that contribute to the process. The tasks are: 1) understanding the process, 2) establish the process and 3) improving the process. The goal of process owner is excellent performance of the process. It is achieved through continuous improvements and adaptations to the organisation's and process's customers' needs. Managers are there to make the excellent performance a possibility. They ensure that organisation works according to the processes but most of all they act as coaches continually thriving for better performance in the process. Business-units are managed through network of processes and their responsible managers guide the development of process networks for future needs. Process-users work in the processes, and the fundamental shift in the way or working is in improvement actions becoming a part of daily work. Process-users are the main source of improvement suggestions for process owner and managers. The role of director is described as person or group which is responsible for, for example quality development, problem solving, recruitment and strategy creation. (Laamanen, 2001, pp. 123-132)

As we now know, the process management is a sum of its parts. It has prerequisites for an organisation as well as its processes. It consists of core elements that in the end define the success of the approach (Rosemann & vom Brocke, 2010). It needs simultaneously run actions to be nimble and adaptive (Lock Lee, 2005). It is not an instant shift when a company adopts process management. It is a growth process. (Hammer, 2007; Laamanen, 2001) It is a mindset shift from functional organisation to more co-operative and transparent way of working. Everyone is responsible for the success of the company and everyone should be interested in developing one's own work. It can be achieved by giving some of the responsibility to process-users and helping everyone learn (Laamanen, 2001, p. 129).

3. CHANGE MANAGEMENT

3.1. Understanding Change Management

First of all, change management in this study is a shortening of organisational change management. Richard Newton (2007) points out that the term change management can be understood in different manner among people of different backgrounds. For example engineers talk about change management when handling changes in engineered items whereas operational managers mean coping with changes in the operations when talking about change management (Newton, 2007, p. 9). Nevertheless change management is a principle of handling the transition from one state to another. In organisational setting the states are just vaguer, compared to engineering. The world of today is in a constant change and the pace seems to be almost exponential (Green, 2007, p. 4). Management of companies have been less successful in managing the change, though. Only 6 percent of change management projects aiming to improve performance were reported as completely successful according to McKinsey survey (2006, p. 4). So there seems to be plenty of room for improvement. Paton and McCalman (2008, p. 3) also remind that success in managing and exploiting change situations is typically characteristic for the "winners" of society. Building on that, it is important for a company to be good at managing change.

Bernard Burnes (2004, p. 261) implies that change management is a complex entity that draws on a number of social science disciplines and traditions. This makes defining the core concepts of change management rather difficult. He argues that the social sciences themselves are interwoven and to understand the behaviour of people managing change one needs to refer to theories of psychology. He introduces three schools of thought that form the central planks on which change management theory stands. Those are the schools of *Individual Perspective*, *Group Dynamics* and *Open Systems*. (Burnes, 2004) Cameron & Green (2009) describe these issues under themes of individual change, team change and organisational change. They maintain, though, that every change stems from handling the individuals right (Cameron & Green, 2009, p. 3). That can be seen also in literature. Most change management books introduce leadership as a major contributor to successful change. Organisational politics plays also its own role in change management. Paton & McCalman (2008) shed light on the power play between different parts of organisation and between powerful individuals. It is important to understand that organisational politics is nothing new but it has a major effect in strategic planning and implementation of change as well as the communication related to change. (Paton & McCalman, 2009, pp. 259-266) Kets de Vries & Balasz (1998, p.619) imply that people get on a protective stand when facing change affecting them and that leads to politicking

and turf fights. Turf fights, or turf game tactics, can be described as means of defending one's own interest.

Change management is needed for understanding the situation the organisation is in, pointing out the pressure causing the change and realising the resources needed for the transition as well as the means for achieving it. Newton (2008, p. 7) introduces change management as a set of processes, tools, techniques, methods and approaches for achieving a desired future state. There are various views of how to manage change. Burnes (2004) identifies two major schools of change management, these being the school of planned change and the school of emergent change. In planned change, which was first developed by Kurt Lewin in 1940s, the change is seen to go through three phases. First the current situation is unfrozen, exposing the organisation for the change, after which the changes are made and situation frozen once again. This process is supervised through action research, which is about following the situation closely and identifying alternative solutions throughout the change. School of emergent change challenges this situation by saying that there is no such situation where the organisation is completely frozen. In emergent changes the complete outcome of the change is a result of a number of smaller adjustments throughout the organisation. Both schools take into account the fact though that the change never happens in a vacuum, that is, there are always outside forces either hindering or speeding up the change. (Burnes, 2004) These are not nearly all of the views of change management. Paton & McCalman (2008, p. 23) underline though that the key to successful change management isn't in just one school of thought but understanding the circumstances around the phenomenon and adapting according to needs. Burnes (2004a, p. 899) concludes that the key to being successful is in understanding what the company is trying to achieve, the context within which the company operates and strengths and weaknesses of different approaches to change.

Sources for the need of change are many. Technology and civilizations globally thrive for new achievements. Creative thought maintains the increasing phase. (Paton & McCalman, 2008, p. 5) Organisations face challenges from strategic perspective. It might be due to, for example, lack of competitiveness, new entrants on the market or long term changes that are about to happen in the specific industry the company is in. (Balogun & Jenkins, 2003, p. 247) Organisations need to change in order to cope with the strategic challenges. It is typically achieved with actions such as redesign of processes, restructuring, mergers and acquisitions and total quality programs. (Raineri, 2011, p. 266) There are also needs from operational perspective. On one hand, operational changes are a means of transferring the strategy to action (Fenton, 2007, p. 114). But on the other hand, there's also a need for the organisation to develop its processes and procedures and those are referred to as operational changes. (Newton, 2008, p. 4) Yet, not all executives, even when accepting the need for change, are actively taking action. What the executives need is called a *focal event*. An event when they feel pushed, that is, feel the urgency of the need for change. (Kets de Vries, 1998)

Newton (2008, p. 4) points out that the need for change comes either from within the company or from outside as a result of change in environment. Oakland & Tanner (2007) don't agree with that view. Their research pointed out that all the need for changes that seemed to come internally, could be traced to an external event. (Oakland & Tanner, 2007, p. 580)

Whatever the type of change, it is important to exploit the change in order to effectively and progressively manage it (Paton & McCalman, 2008, p. 4). There are differences in perceiving how the change needs to be managed, as mentioned earlier. The base though, for embracing the change is the need of understanding the situation. As anyone can relate to, one can't start a journey (in this case the change) without knowing where to go and what are the means of travelling. Then the differences in aspects arise. Burnes (2004) introduces two main perceptions of change management, those being emergent and planned change. In emergent change, roughly depicted, the personnel are given the freedom to travel how they will but they need to reach certain, a roughly specified destination. In planned change, the personnel are walked through the route to a well known outcome. There is a clear link in change management practices to the organisational theory. Burnes (2004) uses the beginning of his book describing the various organisation forms and theories from Tayloristic view to contemporary models. Cameron & Green (2009, p. 134) point out that there are different perceptions of organisation model that affect how the change can be approached.

Helping to understand the organisation, Gareth Morgan (1998) identifies eight metaphors that explain certain identifiable characteristics:

- Machine
- Organism
- Brain
- Cultures
- Political System
- Psychic Prison
- Flux and Transformation
- Instruments of Domination

Cameron & Green (2009, p. 99) have filtered all but four out of the picture. Those four (Machine, Political System, Organism and Flux or Transition) are what consultants mostly use when describing organisation. The use of metaphors gives easier understanding of organisation but it always creates distortions too. (Morgan, 1998, p. 5) Paton & McCalman (2009, p. 176) claim that the models people tend to use are too limiting. Brooks (2003, p. 137) continues that if the models are used as problem solving tool they tend to find different problems that are related to their way of thinking. This in mind it must be noticed that one shouldn't become blind to other perceptions when building understanding in change situations.

Organisation can be viewed as a *Machine* consisting of interlinked cogs. When one part of the organisation, a cog, is changed, the others need to change accordingly in order for the machine to function. (Cameron & Green, 2009) The similarity can be viewed in Burnes' (2004, p. 265) view of the open systems school where a change in one subsystem of the company brings change pressure for other departments as well. It is worth mentioning that it is not the same as perceiving organisations as open systems. Morgan (1998, p. 40) depicts organisation as open system with a metaphor of *Organism*. Organism is something that adapts to changes in its environment and survives. Here the major difference between planned and emergent change can be seen. Machine is fixed with certain, planned, procedures whereas organism adapts itself to the environment.

An organisation which is characterised by competing interests, conflicts and power plays is best understood with *Political System* metaphor (Morgan, 1998, p. 147). Paton & McCalman (2008) see organisational politics as part of everyday life in companies and it can't be detached. It is mostly about information power and coalition building and their ethics. (Paton & McCalman, 2008, p.275) Bearing this in mind and Brooks' (2003) statement about problem solving above, it needs to be understood that one metaphor may not always be enough. It is individuals who perceive the organisation in their own manner. (Morgan, 1998, p. 3) Morgan's (1998) *Flux or Transition* metaphor depicts an organisation that is not capable of affecting its environment nor is it capable of transforming itself either. In such a situation a company is practically powerless to manage the changes it faces. The order of organisation naturally emerges from chaos. (Cameron & Green, 2009, p. 105)

Paton & McCalman (2008, p. 176) note, just as Burnes (2004) does, that management profession and organisational theories clearly affect how change will be managed. It is thus important to understand not only organisational metaphors but also organisation and management theories in order to understand different views of change management. Brooks (2003) breaks down the history of organisation theory into five phases:

- Technical-rational approach
- Socio-human approach
- Systems theory
- Contingency theory
- Contemporary models

Technical-rational approach has its roots in the late 19th century. It comprises such theories as *Bureaucracy, the Classical School* and *Scientific Management*. Bureaucracy was introduced to organisation studies by Max Weber (1864-1920). This was a model of hierarchy and reporting and its lack of competence was noticed in form of stiff rules and neglecting individual initiative and creativity. The classical school pointed out that laws and principles form a basis for effective organisation. The armed forces were a major contributor to creation of classical school. The view of the organisation is comparable to

a machine metaphor. Organisation structure is rather fixed and better for repetitive tasks. Scientific management's primary spokesperson was Frederick Taylor. Taylor's theory was about making the tasks as efficient as possible. Similarities between the machine metaphor and scientific management are rather obvious. The clear distinction between management and workforce was a crucial point. It was assumed that workers can only be motivated with money and comparable benefits. The main point in technical-rational approach was that theories claimed to be universal and applicable in any organisation. They lacked almost completely the human relations aspect of work design and change management was about management designing the work differently. (Brooks, 2003, pp. 122-128)

The socio-human approach takes a completely different stand when talking about workforce and their motivation. Chester Barnard (1938, in Brooks, 2003) was one of the first to propose a new theory of social cooperation in organisations. He understood the presence of informal organisation. One of the most famous studies in the field of socio-human approach is the Hawthorne studies. The outcome of those studies shed light on the motivation of individuals, the control that groups have on effectiveness and new needs for management and leadership. It has to be noted that the study was about making the organisation more effective, not just about easing work conditions. (Brooks, 2003, pp. 128-130) Elton Mayo, who led the Hawthorne studies, proposed that humans have a need of belonging and they are motivated through recognition and security rather than purely money. The human relations school opened doors to open discussion between workforce and management in order to gain buy-in in reorganisation. (Burnes, 2004, pp. 59-60)

Systems theorists try linking the technical-rational and socio-human aspects of organisation together and adding an outside environment view to organisations. (Brooks, 2003, p. 130) Ashmos & Huber (1987, p. 609) maintain that the early theorists were dealing only with internal efficacy and thus didn't bother with studying the external environment. Johnson et al. (1964, p. 367) suggest that thinking through systems help managers understand and cope with the complexity of the environment and problems in organisation. The systems theory recognises that every organisation has to be built as individual set of systems to meet its operational requirements. (Johnson et al., 1964, p. 373) Systems thinking paved the way for appraising the complexity of organisations, interconnectedness of different parts and the value of teamwork. It also increased organisational flexibility and readiness to change. (Brooks, 2003)

The acceptance that there is no universal way to organise is a central teaching of contingency theory as well. Organisational structure, job design, management practices and other aspects of organisations as well are contingent on a vast amount of internal and external, tangible and intangible variables. (Brooks, 2003, p. 132) Whereas systems theory seems to implicate that there can be a one best way of an individual company to operate in its environment, the contingency theory doesn't approve that. Paton &

McCalman (2008, p. 179) conclude that organisations can be even internally differentiated. This seems to indicate that changes aren't as centrally controlled as in previous theories.

Burnes (2004) presents three new theories that are developing as contemporary approaches. Those three are the *Culture-Excellence*, *Japanese management* and *Organisational learning* approaches. They are seen as largely the same theory. Yet, there seems to be differences when looking at where the organisations originate. (Burnes, 2004) Culture-excellence approach has been strongly brought up by authors such as Thomas Peters & Robert Waterman (1982) and Rosabeth Moss Kanter (1983) whereas organisational learning has begun with work of Chris Argyris (1993) and brought into fame with work of Peter Senge (2005). (Burnes, 2004, p. 87) The Japanese management can't be unambiguously described but its implications are remarkable globally. (Burnes, 2004, p. 117) We're not going to dig deeper into the Japanese management though, since it relies mostly on the culture of Japan.

What seems to be common for the contemporary models is the ability to embrace complexity openly. That is, understand that organisations are complex units and they should be treated respectfully. Contemporary theories differ mainly from contingency theory in their lack of need for control. The models have nevertheless made some sort of sense out of the complexity and chaos. Peters & Waterman (1982, p. 13-16) found out through their research that successful, innovative companies possess eight distinguishable attributes, the first being a bias for action. When there's a problem the companies get a hold of it and fix it, immediately and thoroughly. Secondly, the companies learn from their customers what they need and want. Autonomy and entrepreneurship are cherished all the way through the company, the people are there to innovate. The fourth attribute is to count on the people. The company has to be also value-driven and a hands-on type of organisation. It is important for the leaders to know and value what their subordinates are doing and visit them every once in a while. The sixth learning is to keep doing what the company is good at and never acquire a business where the company is not good at. Then, it is important to keep the organisation lean and simple. The last attribute of a successful company is to have loose-tight properties simultaneously. That is, to find the balance between rigid control over the whole company and autonomy in its sub-units. (Peters & Waterman, 1982) From the authors' views can be drawn a conclusion for change management that companies need to be agile, take the changes as they come from the customers and market, value the peoples' views and yet have strict control of the structure.

Kanter (1983, p. 17) too saw the importance of free thinking amongst employees as a source of company success. She stressed the need for management to understand that times change and the organisation has to change as well. A vast amount of companies, at the time the book *The Change Masters* was published, needed relearning to trust their employees' intellectual capital and not just try to fit the individuals into the system – let

them be entrepreneurial. Kanter (1983) states that entrepreneurial companies always work for their competence, that is, focus more of their resources and attention on what they don't know yet, rather than nourishing the present. She draws a conclusion that if something hasn't worked in the past; it doesn't mean it won't work ever. She continues that it works the opposite as well. If something has worked in the past, it doesn't mean that it should remain. Those are *integrative thinking* and *segmentialism*. The speciality of integrative thinking is that the company specialises in bringing down barriers between parts of the organisation and let the information flow across departments. That helps the organisation handle the change (or the problem) holistically. The segmentialist view handles the problem independently of its context and as narrowly as possible. They see that problems are best handled with specialist units and cut down in small entities. The problem arises in handling the interconnectedness of the problem between parts of the organisation. (Kanter, 1983) Participation is a driving force for human dignity and motivation for work, but there's more than that. Taking a broad array of people in, when making choices and planning change, gives the company unexpected contributions from individuals. It helps people adapt to changes and broaden their skills by opening their eyes for interconnectedness and helps them appreciate the complexity. Mastering the organisation requires three sets of skills: *Power skills, team-building and employee participation* and *understanding how the change is designed and constructed*. (Kanter, 1983, pp. 34-35) Power skills comprise the ability to persuade people to share their information, support and resources for the problem in question. It needs the team around it before becoming effective. After having the resources pooled, it is necessary to understand how the micro-changes relate to the macro-changes or strategic guidelines. Kanter (1983) and the culture-excellence school stress the need to be open and nimble, thus taking advantage of the innovativeness of employees.

The main principle Argyris (1993, pp. 1-2) presents in organisational learning is creation of actionable knowledge. The organisation learning happens when a problem is surfaced and corrected. It is just the first step to find the problem, though. The major contribution to the solving is made when the fix is created to be permanent. The main problem in organisations is that they have defensive routines that prevent learning and creating actionable knowledge. (Argyris, 1993, pp. 49-50) The main barrier is that even though the problems in organisations are understood, they are bypassed and covered up. That is to say, problems aren't discussed and the problem of not discussing the problems is not discussed either. It is because people learn early on in their life to deal with (or avoid) embarrassment and threat. The same defensive routine prevents the persons from discovering the sources of embarrassment or threat. (Argyris, 1993) This problem is addressed in change management literature by Paton & McCalman (2008) as well. They discuss organisational politics, turf game tactics and controlling the information. (Paton & McCalman, 2008, pp. 251-258) The way to overcome the defensive routines is to start discussing openly. Meaning the reasoning behind claims is brought into open and for discussion. Then the intention behind the action is known and

can be tested. The intended outcome should be reached and then actionable knowledge is created. If the results are not what they were intended to be, the problem once again has to be addressed. (Argyris, 1993) For change management this means open discussion of intended solutions and testing the theory in practise to create actionable knowledge for future use. The knowledge is embedded into the people working with the change.

Senge (2007) maintains in the cover of his book, *The Fifth Discipline*, that "In the long run, the only sustainable source of competitive edge is organisation's ability to learn faster than its competitors". The fundamental learning units in organisations are working teams and their ability to learn consists of three components: *Aspiration, Reflective Conversation* and *Understanding Complexity*. (Senge, 2007, p. xi) Systems thinking is a mindset of understanding the complexity of problems in organisation. It is about understanding the situation completely, everything connected to it and causal relationships in between. Aspiration is about shared vision communicated throughout the organisation and personal mastery. (Senge, 2007, pp. 6-7) Personal mastery is closely related to Chris Argyris's (1993) model of creating knowledge. People's innate hunger for continuous learning should be nourished. Reflective conversation consists of unearthing mental models of oneself and team learning and its dialogue. Mental models are ways of seeing the world and by unearthing one's own perceptions the others are better able to understand the logic behind choices one makes. Team learning doesn't happen if all issues can't be openly discussed and scrutinised, that includes the mental models as well. (Senge, 2007, pp. 8-10) The learning organisation apparently values all the employees in the organisation and tries to create structures in it for better communication and openness. It surfaces painful conversations about "taboo" subjects in order to dig deeper into the logic behind choices. The learning organisation model as other contemporary models stresses the need to be as nimble and ready for change as possible. It should be built in the organisations' culture.

The contemporary models all seem to cherish fast and reactive change. That is, the changes are seen to come from within the company for external response in order to get the most out of the market and delivering value to customer. This is typically characteristic for emergent change. That said, it can't yet be deemed that there's no such thing anymore as planned change. As Burnes (2004a) implies, there can be a working mix of different approaches. In the company that Burnes (2004a) studied, the changes were started with emergent approach and the restructuring was later on done as a planned initiative. (Burnes, 2004a, pp. 891-897) Smaller scale changes with longer time-span are mostly handled with a plan; rapid small changes are handled through work design; slow cultural changes are seen to come emergently whereas bigger and more disruptive change is seen to come about with bold stroke. (Burnes, 2004, p. 325) The contemporary models share the understanding that employee participation is a core concept. It is for the company's benefit when more employees understand the complexity and respect the connections between parts of the organisation. The

participation may be shadowed by defensive routines on all levels as presented by Argyris (1993) and it needs to be taken into account as well. All in all, it is important to notice that organisation theory has evolved slowly to embrace change management as a core concept. Change management as it is understood today. Early on changes were made only top-down and gradually the control has spread wider into the company (Kanter, 2008). Nowadays it is more about spreading the load of change across the company and getting valuable input from all levels to build a comprehensive image of the complex situation to be able to handle it.

Understanding the organisation theory and the metaphors are just for help to deal with and appreciate the differences of how people perceive the organisation and changes around them. These are not all the means to help understand change management. The changes in organisations and its parts can be characterised by a number of attributes (By, 2005; Burnes, 2004). They are discussed in further detail in the next subchapter. After introducing the different forms and scales of change, the means of causing and managing change are put under the magnifying glass.

3.2. Dimensions and Varieties of Change

As discussed above in previous subchapter, change management is characterised by organisational metaphors and –theory. It can be further characterised by its rate of occurrence, its scale and how it comes about, just to name a few. (By, 2005) The change can happen on individual level, team level or on organisational level. (Cameron & Green, 2009; Burnes, 2005) Paton & McCalman (2008) have also differentiated the systemic side of change and its implications on personnel. All changes can be located between the hard and soft ends of the change spectrum. Hard end meaning the change is completely systemic and doesn't affect people. (Paton & McCalman, 2008, pp. 21-25) Typically the change initiatives are not only of one type of characteristics but cover various aspects on various levels. (Burnes, 2004, p. 327) That is why it is crucial to know different varieties and dimensions of change.

Knowing about the amount of organisational metaphors and organisation theories, it is easier to appreciate different views in how to manage the change. A search in Amazon.com with key words *change* and *management* turns up almost eight thousand results in business and management book section only! Each of the books has an individual approach to change management (Sirkin et al., 2005). By understanding the defensive routines in organisations and individuals, one can get better understanding why the change may be so difficult and organisations don't learn from their mistakes (Argyris, 1993). The dimensions in this thesis mean the level of organisation, whether the change happens in individuals, teams or in whole organisation and if it is of systemic or human in nature. Varieties of change -section handles the speed and rate of change and how it comes about. These are handled next, piece by piece, and combined with knowledge of organisation theory and metaphors when applicable.

3.2.1. Level of Organisation

On individual level, managers must be able to understand the change process and how individuals are affected by it in order to successfully manage change. There are various theories of how to help people through the change. Managers themselves go through psychological transitions in change situations inside the organisation. (Cameron & Green, 2009, pp. 12-13) Jon Stephens (in Brooks, 2003, p. 14) see the individuals as basic building material for organisations. He continues that personality of an individual is a combination of innate characteristics and influences from the surrounding environment. (Brooks, 2003, p. 16) Burnes (2004) identifies two main camps in individual perspective school, those being the *Behaviourists* and *Gestalt-Field psychologists*. The author claims that behaviourists see all action as learned from rewarding behaviour. Thus actions can be affected by designing rewards. Gestalt-Field psychologists go beyond the behaviourists in that they place importance in understanding how the individual perceives, interprets, the action and reward of it. (Burnes, 2004, p. 262) Cameron & Green (2009, p. 16) have handled the Gestalt-Field theory under *personal learning*. They have also added *cognitive*, *psychodynamic* and *humanistic psychology* approaches under the scope.

Cameron & Green (2009) and Burnes (2004) present that behaviourist approach is about an individual learning what is rewarding action. In change it means people do things differently if it is rewarded. Once again it is important to notice that every individual is different from innate properties and thus handles the external stimuli differently, meaning their personalities differ (Brooks, 2003, p. 16). That means it is important to appreciate differences in individuals and know about the means how to affect them. Personal learning sees that in order to change, one has to learn something new and that includes both the new way of working and how one's actions affect other people (Cameron & Green, 2009, p. 14). Personal learning theory looks at the phenomenon on a larger level than behaviourists.

The cognitive approach has developed from the theories of behaviourists. It focuses on internal processes which behaviourists weren't interested in. The cognitive approach maintains that the person acts as he or she does on grounds of how they see the situation they are in. They work on their own insights of right and wrong behaviour. (Cameron & Green, 2009, p. 25) It seems to have a lot in common with personal learning but doesn't focus on external stimuli as much. Stephens (in Brooks, 2003) introduces the psychodynamic perspective mostly as work of Freud. It suggests that personality consists of managing the balance between natural self and learned self. Learned self develops through environmental happenings. (Brooks, 2003, p. 19) Humanistic psychology approach combines some of the insights of previous theories but takes in more soft attributes of individuals such as love and self-actualisation. The individuals need to be fully aware of self and others in order to be able to affect others. (Cameron & Green, 2009, pp. 40-50)

It might be confusing to read about theories of individual psychology. It is not the main point to understand how different theories work. It is about understanding that even development of personalities can be seen differently. Then it is worth noticing that in order to successfully connect with an individual, it is crucial to be able to communicate without barriers. That is, without assuming what they think. That means breaking the defensive routines and bringing up topics that enable the individuals to learn from one another (Senge, 2005, p. 8). Different people perceive situations from different points of view. All of the people are affected by for example stereotypes, previous experiences, different attitudes and values. (Brooks, 2003, p. 24) Balogun & Jenkins (2003, p. 255) conclude that in most organisations the people are seen as passive recipients, thus neglecting the knowledge generation perspective. It must be remembered that relationships between individuals are shadowed by political behaviour. Paton & McCalman (2008, p. 254) point out that by politicking people try to accomplish personal and/or organisational goals – both in good and in bad. Change management on individual level is about helping the employee(s) through the changes in the environment. (Brooks, 2003, p. 43) Affecting people and managing change is further discussed and described in the next subchapter that handles causing change.

Brooks (2003, p. 87) has divided the mass of people into groups, psychological groups and teams. It is the definition of them that helps understand the differences in various compositions of a mass of people. Group is the general term that identifies packs of people without a broader meaning. Psychological group consists of people who interact with each other, are aware of each other and who perceive themselves to be a group. (Brooks, 2003) This could be for example a class of pupils. Team is the closest knit group of people. Team members work together on common goals, meet each other regularly, and have roles and responsibilities that are usually clearly defined (Cameron & Green, 2009, p. 65). Teams can be further specified as for example management, virtual or change teams. The learning and change, when looked at from a team perspective, can happen within the team or as collaboration between different teams. All teams go through a change process. Whether it is about new member coming into the team, somebody leaving the team, change of team's purpose or scope, teams have to adapt to new situations. It can be an outside change as well, like organisational change that the team needs to adapt to. (Cameron & Green, 2009)

The *Group Dynamics School* sees that it is better to bring about change through groups since the individuals aren't isolated from the environment and usually act according to group pressure. (Burnes, 2004, p. 263) Oakland & Tanner (2007, p. 580) found out in their research that cross-functional teams with high performers are a significant contributor to successful change. In change situations the learning also happens in teams. It is important for team members to learn cross-functional practices in order to understand the situation more holistically in any situation. (Balogun & Jenkins, 2003, p. 255) Rosabeth Moss Kanter (1983, p. 167) stresses the importance of innovation capabilities when drawing members from a diversity of sources. That is worth noticing

when looking for change management through change teams. The contemporary organisation theories overall seem to value the employee participation. Team learning is one of the main concepts of Senge's (2005) learning organisation. It is worth keeping in mind that teams consist of individuals so one needs to understand the unique individual perceptions as well.

Most of the change management literature seems to be about organisation level change. The frameworks don't look too deep into team level nor do they cover the individual tasks. Cameron & Green (2009, p. 109) have aligned nine different change management frameworks with four of Morgan's (1996) organisation metaphors. Given the individuals' different interpretation of the same situation (Brooks, 2003) and the perception that books rarely provide actionable knowledge (Argyris, 1993, p. 32), it can be only thought of as instructional alignment. That is why the table is not presented in this study. It is important though to establish understanding of the prevailing situation in order to effectively manage change (Paton & McCalman, 2008, p. 4). That can be helped by understanding the underlying organisation theory and/or metaphor. (Cameron & Green, 2009, p. 98) It is then about sharing that understanding to be scrutinised by others in order to have debate about the perceptions. When all who are affected by the change understand the reasoning behind the change, the intended outcome of the change and its different phases, the theory behind the action can be tested. This way, be the change successful or not, the organisation learns. (Argyris, 1993) Some frameworks for organisational change management are presented later on in this study and a new model is created from literature review.

The *Open Systems School* takes a holistic, organisational level view of change. It maintains that organisation consists of interconnected sub-systems and a change to one part of the system will have impact on other parts as well. (Burnes, 2004, p. 264) It is closely similar with Senge's (2005, p. 7) *Systems Thinking* that sees everything connected. Burnes (2004, p. 325) sees cultural, structural and business process changes as organisation-wide changes. Since the change situation is usually not just about solely cultural change or structural change it is important to identify the focus of the change. (Burnes, 2004, p. 327)

Burnes concludes that all of the different schools of thought present themselves as the most effective model of change management, if not as the only one. He reminds though, that none of these schools are particularly in conflict with each other but rather complementary models. (Burnes, 2004, p. 266) Even though there seems to be no consensus of the correct way of managing change, there are two important issues that persist: the pace of change has never been greater than in the 21st century and the changes come in various shapes, forms and sizes. (By, 2005, p. 370)

3.2.2. Varieties of Change

Since the changes come in various forms, sizes and shapes it is worth specifying the change situation more. Rune Todnem By (2005) has through critical literature review identified three distinct variables in changes, those being rate of occurrence, change characterised by how it comes about and its scale. As different rates of occurrence he presents:

- Discontinuous change,
- Incremental change,
- Bumpy incremental change,
- Continuous change, and
- Bumpy continuous change

Discontinuous changes according to Luecke (2003, p. 102) are single abruptions in the way organisations work and the intention of these abruptions is to improve performance or change organisations direction. It is followed by a long static period. The problem is that these kinds of proceedings are hard to maintain. (Luecke, 2003) Incremental changes then, are step-by-step actions towards organisation ideal. (Walker et al., 2007, p. 762) Bumpy incremental differs from this in that there are periods of time when the speed of incremental changes is faster. (Burnes, 2004, p. 322) By continuous changes By (2005) refers to organisation-wide strategic alignment in change management into direction of constantly adapting to changes internally and externally. Bumpy continuous change is related to continuous change the same way as bumpy incremental to incremental change. The difference is that the continuous change affects the organisation as a whole and incremental change happens only in parts of an organisation. (By, 2005, pp. 372-373) These are just ways of defining the changes within an organisation and they have no implications on actual methods used for achieving change.

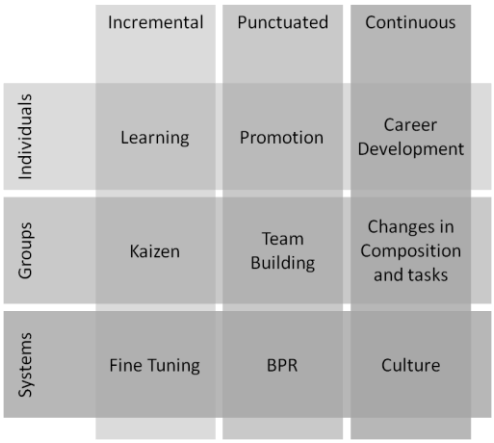

Figure 3.1: Varieties of Change (Burnes, 2004, p. 321)

Burnes (2004) has formed a matrix of organisation levels and rates of occurrence of change (Figure 2.1). He has completed the matrix with examples of such situations but

disclaims that the matrix covers all change situations. There are types of change that cut across the matrix or reach beyond it, for example. (Burnes, 2004, p. 321) It is nonetheless useful presentation to understand the many varieties of change.

How change comes about can be divided into four classes even though the literature mostly talks about emergent and planned change. Emergent change seems to be answer for continuous adaptation to market needs in systematic manner. Planned approach is for moving from one relatively static state to another. There are classifications such as *Contingency* and *Choice* in the literature to handle situations neither classifiable under emergent nor planned approach. (By, 2005, p. 373) The contingency model is noticed by Paton & McCalman (2008) and Cameron & Green (2009) as contemporary way of relating to change. Contingent, or complex, change is seen as non-linear and chaotic form of change. It is neither bottom-up nor top-down. There seems to be understanding that not everything can be planned and controlled and not even strong vision gets you there in all cases. It depicts the situation of *Flux and Transformation* metaphor. (Cameron & Green, 2009, p. 310) Paton & McCalman (2008, p. 4) describe it as "it depends" –approach but they have more optimistic approach to it than Cameron & Green (2009) who see the situation mostly as uncontrollable. In contingency approach the organisation's structure, operating model, environment and so forth are taken into account and the specific approach is decided individually for every change situation. Choice is described as simple as choosing whether to change according to the signals from the field or try to influence the situational variables (Burnes, 2004, p. 328).

Change can be viewed as conducted from the top down or from bottom up. Top-down change is characterised by strong leadership and a little less two-way conversation whereas bottom-up change is seen as driven by employees in organisation. (Burnes, 2004, p. 324) Kotter (1996) on the other hand sees that change is initiated and given guidelines by management and the actual change is done by empowered managers and employees. It is then the strong common vision that drives the change forward (Senge, 2005; Kotter, 1996). There are situations though where a strong coercive approach is needed for rapid organisational restructuring. (Burnes, 2004) Cameron & Green (2009, p. 88) remind though that the management team typically consists of people that aren't too much concerned about the people side of change. It is said that middle managers hinder the change but Sirkin et al. (2005, p. 117) see their resistance for change stemming from the lack of their involvement. Nevertheless, there seems to be differences between authors where to locate the power of the change.

Change characterised by its scale is the most agreed upon of the varieties. (By, 2005, p. 377) Dunphy & Stace (1993) have divided the scale into: *Fine Tuning, Incremental Adjustment, Modular Transformation* and *Corporate Transformation*. Fine tuning is aligning different parts of the organisation for better fit to meet its requirements and purpose. This is typically an ongoing process. Incremental adjustments are bigger, but not radical, changes to strategies, structures or processes to better meet the needs of the

environment. Modular transformation embraces radical changes in parts of the organisation rather than the organisation as a whole whereas the corporate transformation handles the entire organisation. (Dunphy & Stace, 1993) The problem with this kind of classification is the abstract nature of the phenomenon.

Paton & McCalman (2008, p. 22) have extended these views by introducing a change spectrum (Figure 2.2). It is a two dimensional representation of the hard and soft aspects of change. They maintain that it is not the hard, systemic side of the change that is problematic for leaders but the soft, people side of it. They maintain that it is typical that the change is located in the flexi-area of the spectrum being neither completely mechanistic nor complex. By complex they mean soft change that includes changing only people.

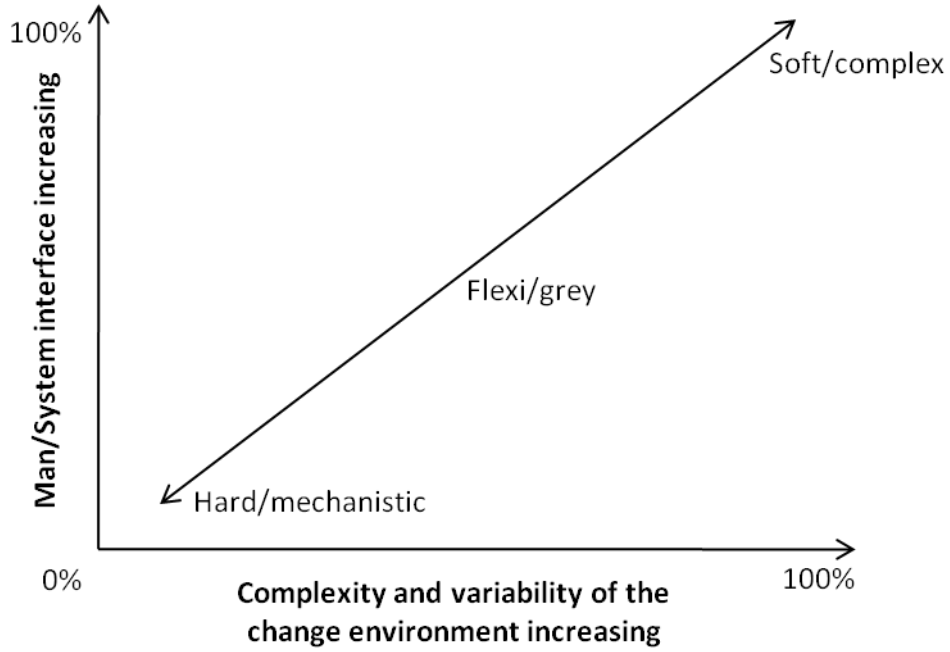

Figure 3.2: The Change Spectrum (Paton & McCalman, 2009, p. 22)

The change is almost never purely of just one type. A purely hard change would be something that is only systems or technology based, happens in a rather static environment, has quantifiable objectives and constraints and has clear implications. The soft end of change spectrum is 100% people oriented, objectives are unclear, change environment is rather dynamic and performance measures are subjective. (Paton & McCalman, 2008, p. 23) It is important to be able to track the process of change thus creating constant pressure for achieving the results. It is through the hard aspects that change can be measured. The soft elements are not to be forgotten, but it is through the hard, tangible, measures that change can be broken into pieces and then the soft attributes become relevant. (Sirkin et al., 2005) The metaphors are not easily identified

in this scalar presentation. This seems to be out of the organisation metaphor and -theory links.

Sirkin et al. (2005, p. 110) have presented a tool to help predict the probability of success in managing change. The tool has four categories: **D**uration (time between project reviews), **I**ntegrity (capabilities of project team), **C**ommitment (of senior executives and staff whom the change affects the most) and **E**ffort (what employees must make on top of their daily tasks to cope with the change). The variables are called *DICE* factors. Boston Consulting Group has used these factors to predict over a thousand change initiatives and the correlation has been consistent. The factors are summed up and plotted on a chart. Chart then shows the probability of success of individual projects thus forcing conversation around the different factors. The chart is useful for tracking different projects and managing the portfolio of projects. They argue that while contemporary change management models offer guidelines for leadership, culture and motivation, to name a few, they neglect the harder, measurable side of change management. The strength in this tool is the numerical outcome it delivers. It can be used for tracking the progress, managing portfolios of projects and forcing conversation. Managers calculate the scores somewhat differently and *DICE* factors can be used for provoking the discussion of the perceptions. (Sirkin et al., 2005) The tool itself and its instructions are in appendix 1.

3.3. Causing Change

This chapter will go through the elements of change management by investigating different models found in literature. By identifying main characteristics and phases of various models there will be distinct entities around which to have discussion. Different models embrace different characteristics of change management. Where one would appraise continuous emergent change, the other would say that the only way forward is through planned, top-down led, coercive change (Burnes, 2004, p. 284). That is why it is important to first understand the organisation theory on which the change management is built and the differences of situations that need to be managed. To ease the complexity of handling change management theories, this chapter is divided into two phases and discussion. The subchapters handle planned change initiatives and emergent change since they are major themes in change management literature. The conclusion part draws the different approaches together and analyses them through comparison and by reflecting to research of successful changes.

It is suggested that all people approach change management in a different manner. It is because people see the world, and indeed the situation, differently and have had different experiences of changes. That is the reason why people try to manage change in their own personal way and leave no room for the idea that it is just their reality and just a one way of looking at the situation. (Green, 2007, p. 14) It is the organisation theory that affects strongly how the change is managed (Burnes, 2004). The organisation

metaphors on the other hand affect how the organisation is seen to work, thus having impact on the approach of change management. (Cameron & Green, 2009) Argyris (1993) tries to overcome the problem of being stuck in one type perception in his book *Knowledge for Action*. The approach to a problem should be open for learning. That is, the intentions and reasoning behind the action should be made clear in order to test it. Through success or failure, the people involved in the action learn. (Argyris, 1993, p. 2) After all, change is about understanding the prevailing situation and moving towards the desired end state (Paton & McCalman, 2008, p. 4). It can be in phases, all at once or through continuous adaptation. It can also be planned or emergent. (Burnes, 2004)

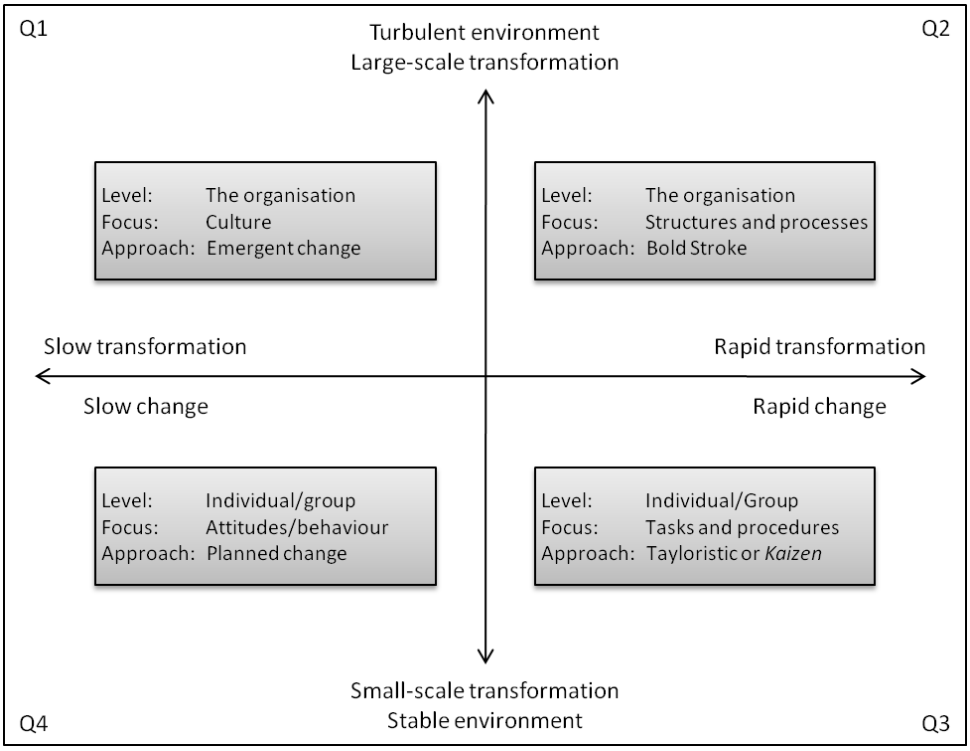

Figure 3.3: A framework for change (Burnes, 2004, p. 325)

Burnes (2004) has formed a framework which combines different change dimensions and styles (figure 3.3). It is a representative presentation which gives a starting point of deciding the focus of the change and how to start approaching it. He reminds that the question if the change can be described as mainly structure-orientated or mainly-people orientated is a matter of sequencing - what is the focus in different phases. Part of the organisation might be going through small-scale piecemeal changes when the whole organisation is going through a process of rapid transformation. (Burnes, 2004) The problem with these kinds of presentations is the subjective interpretations of the scales. That is why it is always important to openly discuss the methods to be used.

3.3.1. Planned Change

Planned change is mostly based on the work of Kurt Lewin in the 1940's. Lewin's work is based on a fourfold approach that comprises *Field Theory, Group Dynamics, Action Research* and *Three-step Model*. He saw the themes as a unified whole where each part supports the others. To be able to bring about planned change he saw that all of them are necessary. (Burnes, 2004, p. 270) Cameron & Green (2009) connect Lewin's three-step model to *organism* and *machine* metaphors in organisation. It is through planned endeavours that the organisation manages its changes. In *organism* metaphor the source of the change is outside the organisation whereas in *machine* metaphor it's the management's perception of the desired future state. (Cameron & Green, 2009, p. 110-113)

Lewin saw the importance in *Field Theory* as ability to investigate the status quo. By understanding the current situation and forces that maintain the present, one is able to appreciate the way people act - on individual, group and organisation levels. Identifying the forces at play, it is possible to affect to the foundations of how people act. (Burnes, 2004, p. 271) *Group Dynamics* is the view that an individual belongs to a group which affects his behaviour. Lewin saw it unnecessary to try to affect individuals separately. By *Action Research* Lewin tried to prove the theories he developed. He suggested that firstly, change needs action and is directed at achieving it. Secondly he claimed that successful action needs thorough analysis of the situation, identifying all the alternative solutions and choosing the most appropriate method for the situation at hand. (Burnes, 2004, pp. 272-273) Argyris (1993) sees the genius of Lewin in his approach of proving the theory and promoting learning.

Burnes (2004, p. 274) presents the Lewin's process of change, the *Three-step Model*, as developed not primarily for organisational purpose but in fact for societal issues. The model has been briefly introduced earlier on in this thesis. According to Lewin these main steps are needed for successful change project. (Burnes, 2004) The first step is *Unfreezing* the present situation. That is done by defining the current state, surfacing the driving and resisting forces and forming the desired end state (Cameron & Green, 2009, p. 111). In *Moving* phase the group should seek to understand all the forces at play, identify on trial and error basis all the available options and moving on towards the end state. This promotes the learning as described in *Action Research* theory above. *Refreezing* is the last phase. It is about stabilising the group at the new behaviour. That is, the group behaviour should fit into its environment and the dynamics inside the group should be aligned. (Burnes, 2004, pp. 274-275) This suggests that planned change is viable for incremental or discontinuous changes on group level. Then again it can be continuous change on organisational level but done in increments as described earlier.

Bullock & Batten (1985, in Burnes, 2004) have studied 30 different planned change approaches and combined them into their own model. Cameron & Green (2009, p. 113)

see the Bullock & Batten's model of change only serving the *machine* type of organisation's purposes. Burnes (2004) describes the model comprising two major dimensions: change phases and change processes. Phases are distinct states that the organisation moves through when it goes through change and processes are the methods used to move between the phases. The model consists of *Exploration, Planning, Action* and *Integration* phases. In *Exploration* phase the organisation decides whether to change or not based on the analysis. Processes in this phase are to become aware of the need for change, seeking outside assistance (a consultant/facilitator) and deciding responsibilities of each party affected by the change. In *Planning* phase the problem or concern has to be understood. Understanding is sought with process of information gathering, establishing change goals and designing the actions needed to achieve the goals. Information is used for thorough analysis and correct diagnosis of the problem or concern. *Action* phase is where the planned changes are implemented. It is done through processes of designed action, gaining support for the change, evaluating the activities and gathering feedback for adjustments during the action. *Integration* is done by stabilising the new status-quo. The process to do this is to reinforce new behaviours through feedback and reward systems. This gradually frees up the need of the consultant/facilitator. It is continued with diffusion of successful aspects of the change through the organisation and training managers and employees alike to monitor the changes constantly and to seek improvement possibilities. (Burnes, 2004, p. 277)

The organisational development models of change are an extension for the planned change models. (Burnes, 2004) The methods used are clearly similar but in organisational development the continuous change has been taken into one of its concepts. (Weick & Quinn, 1999) Given the classification presented previously in this study of discontinuous, incremental and continuous changes plus their bumpy revisions, the organisational development would mean on organisational level a more proactive stand for future change needs by adapting continuously. Dunphy (1996) notes that typically the traditional, planned, approach is initiated once a problem is found to be corrected, thus being more reactive than proactive. Van Aken (2007, p. 74) though, sees the possibility that sufficiently powerful stakeholders become dissatisfied with the status quo and start the planned change. One problem in the earlier days of planned change that Burnes (2004, p. 277) brings up is that is focused more on group level. The organisational development school has tried to bring the planned approach up to the organisation level. Paton & McCalman (2008, p. 197) note the most important aspect of organisational development to be a committed workforce. They continue (2008, p. 210) that "Organisational development is about changing the organisation from one situation, which is regarded as unsatisfactory, to another by means of social science techniques for change."

Paton & McCalman (2008, pp. 222-225) introduce Warner Burke's (1994, p. 72) seven phase model and they have elaborated it with their own experiences. Burke's model is

basically identical to the traditional planned approach but it is divided into more distinct phases. The phases are:

1st phase:	Entry
2nd phase:	Formalising the contact
3rd phase:	Information gathering and analysis
4th phase:	Feedback
5th phase:	Planning the change process
6th phase:	Implementing the changes
7th phase:	Assessment

In entry phase the consultant of change (that is the person leading the effort) makes the initial contact with the organisation. The details of the roles to be adopted in the change program are determined first. To formalise the contact, the leader of change and the organisation clarify what will be done. The duration and costs of change are discussed and formalised here. Information gathering phase focuses on interviewing all affected personnel and making sense of their needs. The analysis then tries to make sense out of the data, hidden agendas of different stakeholders, political power plays and such, to make sense of the real need. The analysis is then presented in a form that the organisation could act on the information of it. That is open for feedback. The feedback session must contain three basic elements: summary of the data gathered and initial analysis, general discussion to get rid of confusion and interpretation of the situation and how the change will continue. The planning phase then proceeds with the Unfreeze, Move and Refreeze -pattern. The plan is done by comparing all the alternative means of achieving the desired end-state, choosing the most appropriate and creating a plan which incorporates the unfreezing of present state, moving to the new state and embedding the new state into the organisation, that is, refreezing. Implementation phase is just handling with the resisting forces. Assessment is done by comparing the plan and the actual outcome. (Paton & McCalman, 2008)

To answer to the slowness of the structural and participative approach presented in organisational development, van Aken (2007) has studied the phenomenon from design science point of view. Design science elaborates the starting phases in either planned change or organisational development. The main points in knowledge-intensive designing according to van Aken (2007, p. 70) are:

- Focus on establishing the right specifications
- Strong client orientation
- Deliberate use of substantive and procedural design science
- Holistic orientation
- Focus on desired outcomes

Complete design should provide the recipients or those who make it a reality with all the information they need for their action. The problem in reality typically is not in the designing. The design is indeed done by top management according to the strategic

goals but the implementation is left without attention. The interventions aimed at achieving the design should happen on three levels: *technical, political* and *cultural.* That means the stakeholders should have a say in the technical aspects of the actual design, they should have the political power to contribute and the change should affect the culture of the organisation in order to persevere. (van Aken, 2007)

Both the traditional planned change approach and the more contemporary organisational development are socio-humanistic approaches. That is, the changes are done in co-operation with the organisation and its employees to find a consensus. (Paton & McCalman, 2008; van Aken, 2007; Burnes, 2004) The planned approach reaches for a distinct result with a systematic way of working. It assumes that organisational change can be successfully planned and achieved by a human change manager (Kickert, 2010, p. 2). Planned and organisational development approaches are strongly linked with the learning organisation theories of authors such as Chris Argyris and Peter Senge. (Paton & McCalman, 2008, p. 277) The emergent approach takes a slightly different stand. Let's have a look at it next.

3.3.2. Emergent Change

In the eyes of emergent approach, the change is seen to come as continuous, dynamic and contested process and it has emerged, unpredictable and unplanned results. (Burnes, 2004, p. 291) This stems from the very nature of how organisations develop, at least how the emergent school sees them to develop. As Tsoukas & Chia (2002) present it, organisations are an attempt to order unpredictable human action and channel it towards certain goals by generalising and institutionalising cognitive representations. Organisation can be seen as a pattern that is constituted, shaped and emerging from change. (Tsoukas & Chia, 2002, p. 567) It is not to say that there would be no order in changing the organisation or it would be an undirected process. The emergent approach stresses the unpredictability and developing nature of the change (Burnes, 2004, p. 293)

There are various models or processes for achieving emergent change. Orlikowski & Hofman (1997) studying technological changes in an organisation have presented an improvisational model of change, which accommodates views that implementing change happens on an ongoing process, not an event in time after which the company can resume to a rather steady state, and that all changes cannot be predicted. Their model is said to recognise three types of change: *anticipated, emergent,* and *opportunity-based*. (Orlikowski & Hofman, 1997) Anticipated changes are known in advance, whereas emergent change comes out of individual innovations and their aggregations.

John P. Kotter (1996) developed his emergent approach to change by investigating why so many change initiatives fail to deliver the intended results. By analysing the reasons for unsuccessful change, he has been able to develop a process which incorporates eight

distinct steps. He also suggests that the order should be followed rather strictly. (Kotter 1996) The eight steps in the process are:

1. Establishing a sense of urgency
2. Creating a guiding coalition
3. Developing a vision and strategy
4. Communicating the change vision
5. Empowering broad-based action
6. Generating short term wins
7. Consolidating gains and producing more change
8. Anchoring new approaches to the culture

One of the reasons that prevent change from being a success according to Kotter (1996) is allowing too much complacency. There should be a sense of urgency and desire to change. He suggests that it isn't enough to gain support from the top-management but all middle-management should be backing the change as well. They need to form a guiding coalition to steer the change. To be able to affect to a number of people, there needs to be a strong vision of where to aim. According to Kotter's own perceptions the blurriness of the vision is typically the problem. That is what the strategy is needed for. It clarifies how the vision can be achieved. The chance of being misunderstood is a liability and therefore should not be treated lightly. It is not sufficient to just tell about the vision. The personnel need to achieve the same level of understanding about the change. That is achieved by continuous and clear communication - both formal communications and acting according to the vision. Empowering broad-based action means that obstacles all the way through the organisation need to be addressed to and diminished. That is, no single manager should be able to counteract the change in his part of organisation. The short term wins are for keeping the motivation of the change going. The need for short term wins is ever greater in large changes that last long. The focus of the change is disrupted when it is declared a success. That is why the change needs to be consolidated into the organisation before losing the focus. The bonus rules and KPIs should be aligned with the new way of working if the change is to persist. (Kotter, 1996)

Kotter's (1996, p. 21) process doesn't address the changing nature during change program as clearly as does the Orlikowski & Hofman's (1997) model. Cameron & Green (2009, p. 115) go as far as to say about Kotter's model that it encourages an early burst of energy that is followed by delegation and distance of the problem. Nevertheless, emergent change speaks for continuous adaptation through experimentation. It is mainly handled through small and medium size incremental changes, which over time lead to major re-configuration in organisations. The role of management in emergent change is to foster an environment of experimentation, learning and risk taking. Management needs to adopt the role of facilitator but yet develop a common shared vision for the organisation. (Burnes, 2004, p. 312)The role of employees is entrepreneurial as Kanter (1983) would describe it.

Kanter (2008) sees the empowerment of personnel in an organisation to be a key to success. Earlier on people only acted on instructions that were given but nowadays the most successful organisational giants rely more and more on their personnel in the decision making. (Kanter, 2008, p. 44) The approach of Kanter can be seen rather bottom-up when comparing to Kotter's (1996) model which starts the change from the top. This is subject to interpretation. It can be thought of either way. Higgs & Rowland (2005) studying seven organisations came into conclusion that by adopting complexity theoretical approach to change, the program is more likely to succeed. That is, the models of emergent change were more successful than linear, planned methods.

3.3.3. Discussion

Some contemporary theorists, especially complexity theorists, see Kurt Lewin's planned change as an outdated theory. There are views though, that see similarities between complexity theory and Lewin's work. (Burnes, 2004b, p. 309) Indeed, the distinction between planned change and emergent change may sometimes be difficult. It isn't always helped by the literature either. For example, Kotter's (1996) eight steps of change is described as planned change theory in Kickert's (2010, p. 5) article whereas it is an example of emergent change in Burnes' (2004, p. 308) book. Even when taken both planned and emergent change together, they don't cover all the change situations. (Burnes, 2004, p. 320) But as seen further on, the planned and emergent approaches to change share a fair deal of similarities.

Proponents of planned change speak for the systematic, planned and participative nature of the approach. It can be argued though, that the planned approach is a slow method for organisation wide changes. (Burnes, 2004, pp. 279-281) By managing the change in a planned manner, the organisation is able to understand both inner and outer needs of different stakeholders. A distinct problem owner is selected and it's the abilities and effort of that person that determine how well the impact and outcome of the change is determined. (Paton & McCalman, 2008, p. 109) The planned change is also iterative in its nature. Some opponents of planned change see that the problem is in knowing all the effects of change in beforehand (Orlikowski & Hofman, 1997). The intervention strategy that Paton & McCalman (2008, p. 111) introduce includes a number of feedback loops that help the method being agile for changes. If looked at in more detail, the model of Lewin also includes the action research phase that is about finding out the problems during the change towards the desired end result (Burnes, 2004, p. 273). Thus, the comments on knowing the specific outcome of the change in planned approach can be undermined. It can be agreed though, that planned change aims for more specific outcome and endeavours are done during the change process to reach these targets (Weick & Quinn, 1999, p. 371). A critical view of organisational development initiative, or planned change, is presented by Marie McKendall (1993). She observed that mostly people talk about losing their feeling of control and dehumanisation.

(McKendall, 1993, p. 93) Concluding, there are both kinds of views about this type of change.

Emergent approach sees the change as a series of continuous adjustments, interpretations and innovation which lead to organisational change. (Burnes, 2004, p. 291) This type of change doesn't have a specific outcome in mind but works on a set of targets, a vision. (Orlikowski & Hofman, 1997) Kanter (2008) sees the agility of an organisation as a means of success. She stresses not only the need to adapt to emerging needs by changing, but the approach to change itself in an emergent fashion. (Kanter, 2008, p. 44) The reasoning behind emergent, or complex, approach to change is that emergent systems behave in non-proportional ways; the change is constant everywhere and that there is mutual dependence among systems. In this approach the organisation frames itself emergently. (Lichtenstein, 2000, p. 539) Tsoukas & Chia (2002, p. 567) argue that on one hand organisations themselves are an interpretation of actions and their results and an attempt to form cognitive entities out of the chaos, but on the other hand that organisations form themselves out of change. As can be seen, emergent change is an intangible interpretation of an organisation that is in constant change.

The distinction that is made now in this thesis is that planned change is a set of endeavours to achieve a desired end results that are known in advance. They are achieved with systematic, participative and iterative approach. The emergent change is a process of starting the change with a vision and systematically striving for the not specifically known, hazy outcome by continuous adaptation to the situation. The major difference is that the result of planned change is known in advance. This distinction is not something that is invented during this thesis but it is assumed to be of great help in understanding the approaches. It is not to say that either or the theories fit just for one purpose each. It can be assumed that the organisation theory that the group or team follows, affect how they perceive the change. This view follows the contingency theory that was discussed under *Understanding Change Management* sub-chapter. For example, if the change is of the Japanese type - changing through continuous incremental development - it is more likely to adopt the planned approach. If it is more like Rosabeth Moss Kanter's (1983) approach of entrepreneurial organisation it takes a more emergent view. These variables depend also on which level of organisation they are handled in. The team might handle its changes that are initiated with a greater vision, with planned approach, whereas the organisation as a whole is in continuous change and approaches it in the emergent manner. Dunphy (1996, p. 546) reminds that best practice in one period of time may be the worst practice in the other when talking about change management and that we need competing theories of change management and debate about their bases and biases.

Pettigrew et al. (2001) have emphasised clearly the need to appreciate the difficult nature of change management. Thus they emphasise that there will never be one distinct way to manage change. There are multiple contexts that differentiate change programs.

That is, there are different outer and inner forces that have an impact on the change. It is not enough to understand the different levels of analysis, that is, the inner and outer elements. There are also various processes that are somewhat linked to the change within all those inner and outer elements. (Pettigrew et al., 2001, p. 698) To exemplify, let's think about an organisation wide change going about in a multinational company. It is fairly safe to say that the change situation with its inner and outer elements and their characteristics are very different in two different countries.

Both planned and emergent change theories share the common idea that managers, leaders in some papers, and communication are heavy contributors to change. Much of the changes fail to complete because mostly managers can solve complicated problems but are unable to understand complex problems. That is, managers can solve problems that can be analysed and approached in a structural manner but can't solve problems that don't have easily specified reason. The reason for a complex problem is in the system level. (Higgs & Rowland, 2005, p. 123) Ford et al. (2008, p. 362) continue that the leaders of change interpret the reality around them on their own terms, and think that change resistance is independent of their own actions. These two views taken together form a dangerous combination. The leaders, or the change agents, interpret the reality without practically knowing what lies behind these symptoms and denying their own impact on the resistance. Ford et al. (2008) conclude that resistance does not exist just because recipients of change don't accept the alterations. One needs to take into account also the contribution to resistance on behalf of change leaders and the relationship between recipients and leaders. (Ford et al., 2008, p. 370) Senge's (2007) depiction of a successful organisation model attacks this front with something that he calls *mental models.* Mental models are the leaders' prevailing perceptions of how things work and should work but normally give no room for open discussion of drawbacks of the thinking. That is, the own perception is seen as correct and that perception is hard to change. These assumptions have to be torn down for scrutinising by others in order to really know the prevailing situation and perceptions that people have about it. (Senge, 2007)

Research shows that people build up attitudes that help the change, when treated respectfully. On the other hand, if they are treated unfairly, that is, if promises are broken, trust is violated, messages are even without a purpose misinterpreted or communication breaks, employees will hinder the change. When a communication breaks, it means that either the change agent isn't able to legitimise the change or is ambivalent in communication vs. action, that is, doesn't walk the talk. Misinterpretations can happen by accident or purposefully. (Ford et al., 2008) Purposeful misinterpretations are a problem of organisation politics, turf game tactics. (Paton & McCalman, 2008) Sometimes the change agent tries to save his face, tries to look better than is or tries to induce employee participation. (Ford et al., 2008) Politics are very much in concern when looking at proponents of emergent change. For some the political nature opens possibilities and for some they close of opportunities. (Burnes,

2004, p. 293) Planned change on the other hand takes the politics into account in gathering the information from the organisation. (Paton & McCalman, 2008)

3.4. Conclusions

It is now presented that change management in organisations is a multi-dimensional and -methodological science. It is both about people and systems in change. It is affected by inner and outer forces of an organisation. It can happen on individual, team and whole organisation levels. It can be initiated by an outer force, for example legislation or competition activities, or inner desire to do things in a better way. It can be top-down driven or bottom-up initiated. It can be both reactive and proactive. Changes can be just for fine-tuning the organisation or they can strive for radical transformation. These all are just examples of extreme end of change situations. The real change can be of something in between these extreme ends and differ on every level of organisation.

There are two major approaches in literature that see the change differently: planned and emergent change. It was concluded that more or less, the difference in them is in how they define the outcome of the change. Both, in theory at least, appreciate that changes don't happen in vacuum and the approach needs to be constantly adjusted. Emergent theory relies more on employee empowerment and entrepreneurship whereas planned change in order to achieve its predefined goal emphasises structural approach. In order to combine the structural approach with the emergent theories, Orlikowski & Hofman (1997) have created an improvisational model for change management. It has served as the underlying idea behind the model created in this thesis. In order to capture the phases of emergent change and anticipated planned changes the model needs to be agile. The agility is ensured by reviewing the change progress and choosing a different method, planned or emergent, if felt necessary.

Dunphy (1996) has gathered components that are needed for a comprehensive change management theory. He suggests that there should be a *basic metaphor* behind the rationale of an organisation, an *analytic framework* to understand the process and proceedings of change, an *ideal model of an effective organisation* which acts as guideline for the changes, an *intervention theory* which tells how, when and where to intervene in organisations current actions. A *definition of the role of the change agent* is the last needed piece for a comprehensive theory. (Dunphy, 1996, p. 543) The organisation theory, the ideal model, affects how change will be managed in an organisation. Metaphors give a starting point on which to develop the view of an organisation. Most of the contemporary theories see change as a continuous phenomenon with no specific point of intervention. Some see it as truly continuous and some happening in incremental steps. When broken down to task level, it can be also seen as discontinuous. When approaching change, all of these variations can be seen as the basis of trying to understand the change. The method of managing change should take at least these aspects into account. Drawing on these needs, an iterative process of

change was created (Figure 3.4). With this model the research questions are tried to be answered in the research phase of this thesis.

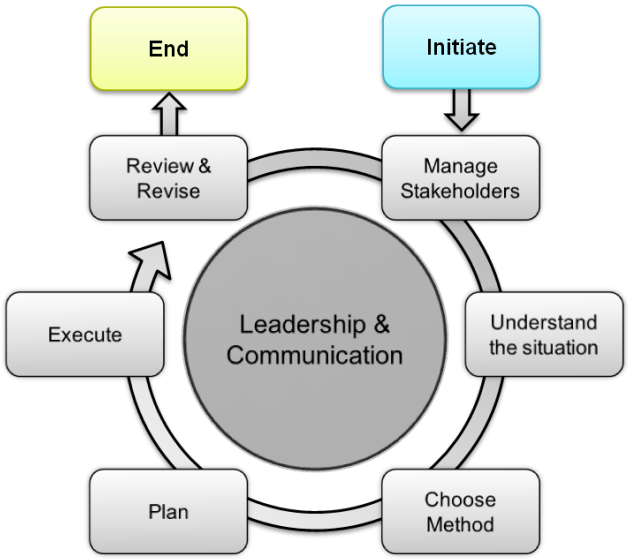

Figure 3.4: Change Management Process

The main groups of individuals are mostly gathered in the starting phase of change - both in planned and emergent changes. Kotter (1996) calls it the guiding coalition, which supervises the change progress and the outcomes. He continues that to be able to develop the right vision, communicate it to large audiences, eliminate obstacles, generate short-term wins, manage a number of change programs and anchor new approaches to the new culture, a leader needs a strong guiding coalition. (Kotter, 1996, p. 52) Cameron & Green (2009, p. 116) and Newton (2008, p. 64) call it the change team. The purpose in their model is just the same: to be able to handle various groups with differing opinions and spreading the load of communication and leadership. This approach supports all of the different levels of organisation in change. It travels through the organisation. To embrace systematically every level of organisation, Litre et al. (2011) have introduced a spine of sponsorship (Figure 3.5). It activates every level of the organisation for the change and prevents situations where people don't know who to contact. Every level should have its own sponsor for the change. It is a matter of status in an organisation. It is not a nomination. (Litre et al., 2011, p. 7) There should be a problem owner, a sponsor, on each level. This spine structure is handled through the leadership & communication -element of the change management process (Figure 3.4). It is through the leader, meaning the sponsor, and whoever is in charge of communication, that the concerns of individuals or sub-groups are handed over to the next level sponsor and on the other hand down to the next level of change teams.

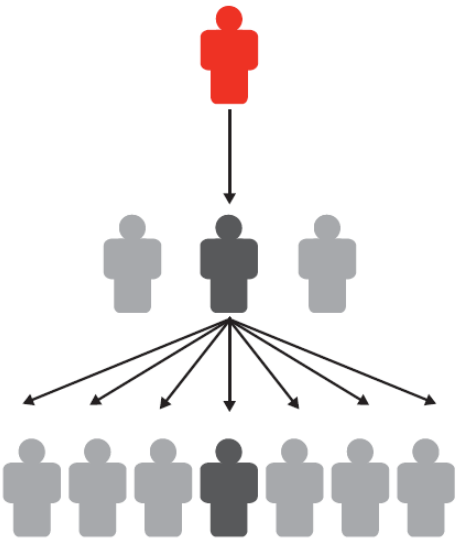

Figure 3.5: Sponsorship spine (Litre et al., 2011, p. 7)

Before gathering the change management group, there needs to be a rough understanding of the situation. That is, one needs to know who is affected before inviting them into the process of change management. (Paton & McCalman, 2008, p. 112) Once the team is gathered a more thorough mapping of the situation is needed in order to understand the complete scale of the change. Green (2007, p. 43) suggests mapping the power and interest of different stakeholder groups, since it affects how easily the change can be achieved. If a powerful stakeholder resists the change it is unlikely to succeed. It is just a part of understanding the situation. Every level on the sponsorship spine should do their own mapping and build understanding of their situation. This is very much in line with the contingency model for change that is represented in the change management spine and introduced in subchapter 3.1. The model should adapt to every change situation uniquely. Throughout the change the method and its usability is checked and method changed if needed.

The concerns are very much different on each level of organisation (Cameron & Green, 2009). The changes in different level are of different magnitude. Organisation may fine-tune itself, whereas a group of people go through a radical change. More successful companies in managing change in organisation structure have set specific goals for the outcome of the change, in terms of duration as well. (McKinsey Report, 2010a) Sirkin et al. (2005) point out that every change is supported or hindered by four factors. They, the *DICE* factors, have been introduced also earlier in this thesis and the instructions how to use them are in the appendix 1. These factors are a good start of forced conversation in different review meetings and in aligning resources for the change. Forced conversation brings out different views of change, as every individual sees the change differently (Brooks, 2003, p. 24). Argyris (1993) claims that by open discussion the organisation can learn and by understanding the situation from different points of view, a most suitable method for change can be chosen.

Based on the understanding of the situation of individual teams of people, a method for the change is chosen. The method can vary between emergent and planned change and alter from discontinuous to continuous change. The method chosen affects the planning phase. That is why it is to be chosen before proceeding to planning phase. Where planned change sets clear targets for the change, the emergent approach sets the vision. In addition, by differentiating between discontinuous, incremental and continuous change, measures of success and progress can be created. Discontinuous change doesn't necessarily have milestones, incremental change certainly has and continuous change can have. All the changes, excluding continuous changes, have a goal when change can be deemed successful.

Planning the change includes various entities and they differ whether talking about planned, emergent, discontinuous, incremental or continuous changes. Measures for reviewing the progress should be made, either going towards the tipping point of discontinuous change or reaching the milestones in incrementally achieved changes. The outcome of the change should be clearly defined as well (McKinsey Report, 2010a; Newton, 2008, p. 32). The success of change can be then unambiguously measured. When talking about continuous change and emergent change, the goal(s) can and most probably will be continuously altered throughout the life of the change (Orlikowski & Hofman, 1997). Plan can include a work breakdown structure to help identify blocks of work (Newton, 2008, p. 96). This goes if the change is a clearly planned one. Nevertheless, plan should include responsibilities of different members in the change team and their targets, be it a visionary one or a specific. Kotter (1996, p. 21) has introduced a term quick win. He also suggests that quick wins should be planned for the progress of change in order to maintain momentum. The frequency and dates for measuring and reviews should be determined also. Long project that is reviewed frequently is more likely to succeed than even a short project that isn't reviewed. (Sirkin et al., 2005, p. 109)

It is important in planning phase to pay careful attention to communication of the change. In prior phases the communication has been for gaining same level of knowledge and understanding about the situation. It has also been for getting all stakeholders into the process and gathering their feedback. Together with all included, a method for the change is determined, a consensual approach, which is a result of open discussion. But when planning the change and the next steps to do, a communications plan is needed (Newton, 2008, p. 183). Before planning phase, the communication can be more informal, educational and happen on one-to-one basis. This plan should take into account the differing needs of various stakeholders. Frahm & Brown (2003), studying the role of communication in organisational change, point out that the view of communication as a tool of merely influencing people, is outdated. They speak for two-way conversations and sharing the interpretations of change goals. (Frahm & Brown, 2003, p. 11) This is further supported by Ford et al.'s (2008) studies and Senge's (2007)

theories. Newton (2008, p. 188) reminds that timing, media used and target audiences should be carefully considered.

Executing the plan means going through the planned actions in the order that was planned and continuously following the situation. The leader of the change on each level is responsible for execution and follow-up. Litre et al. (2011) suggest, drawing on studies on change management in 184 global companies, that to be successful in change program the leaders of the company need to learn and apply counterintuitive approaches to change. Furthermore, organisations are starting to realise that change management is more prone to be a success when taken into account the people side of the change. (Cameron & Green, 2009, p. 73) That is why execution calls for leadership. Daniel Goleman (2000) has introduced six distinct features that an effective leader should possess. Those are: *Coercive, Authoritative, Affiliative, Democratic, Pacesetting* and *Coaching.* (Goleman, 2000, p. 81) It is not to say that these features are not to be used in any other part of the change process. The leader needs to be the one gathering the signals within the change team and adapting his/her behaviour accordingly. It is also necessary to understand how the change is to be brought about. That is, whether it is emergent or planned. Both approaches seem to crave for different styles of leadership. Cameron & Green (2009, p. 139) even differentiate leadership styles between various organisational metaphors. It emphasises the need to understand the situation and method to be used.

Litre et al. (2011) maintain that most of the change programs stall after the *installation*. That is, when the new system is in place. There should be two more phases occurring after this. Those are *realisation*, when all the behavioural changes of the personnel are achieved and *repeatability*, that means learning and achieving better readiness to further changes. (Litre et al., 2011) The emphasis on continuity of change is underrepresented in the literature. It is handled as rather straightforward process with a start and an end. If the theory of change is to be comprehensive it needs to address the issue of continuity. (Pettigrew et al., 2001, p. 700) To address these specific needs the model is presented as iterative where the change is ended only when the planned result has been achieved. The progress has to be measured in every review. The reviewing is done according to the planned measures of progress and success.

The different levels of organisation (figure 3.5) are taken into account in the change management framework by referring to human body as the metaphor of organisation. The ability to change and persist is the spine of the organisation. In the change management framework (figure 3.4) the spine is the iterative process - the support of changing. Communication and leadership between levels of organisation is done through spinal cord. The impulses travel both ways - from brain to the body and vice versa. Vision is set by the eyes in the head where the organisation's brains are. Supporting the change, the personnel in the organisation can be referred to as individual nerves in the neural network providing signals. In organisation theory this depicts a

hybrid of learning organisation and on the other hand the entrepreneurship of culture-excellence model. Nevertheless, the most suitable approach to change must be selected for every situation individually as is the case in contingency view of change management. The adaptation to changes in the environment can be both reactive and proactive, but changes are always initiated by strong enough feeling of pain in the neural network. These descriptions are to answer to the comprehensiveness that Dunphy (1996) craves from change management theory.

The initiation in the framework can come from within the company, through its nerves due to entrepreneurial spirit. It can be quick, reactive adaptation to the painful environment or trying to ease or rationalise the regular work. The change can also be initiated with a strategy, which is constituted on the vision. In that case it is top-down led change. The process doesn't differentiate whether the approach needs to be emergent or planned. The means how the change can be achieved is determined on the basis of how well predefined the goal or the vision is. All change initiatives are reviewed in the brain or at least in the first level of the sponsorship spine. It depends who has the authority to dedicate resources for the additional work needed to achieve the desired end results. Through iterative process and adjustments in various phases to methods, plan or measures and with assistance of clear sponsorship spine the desired end state will be achieved. Constant reviewing and quick wins keep the momentum for the change. Communication needs to be systematic, open and honest in order to root the confidence into the personnel. Rational, understood, well-led and needed changes are going to be successful.

4. RESEARCH METHODS AND MATERIAL

4.1. Research Method: Case Study

Case study as a research method is as Yin (2009, p. 5) presents, a rigorous and fair presentation of empirical data. By presenting the empirical evidence for the reader, the case study should cover contemporary phenomenon in its natural context. The advantage of case study is in its ability to cope with complex social events (Yin, 2009, p. 18). The reason why case study was selected as the method for this research was just these abilities and the nature of the phenomenon to be studied. Experiment, which is a method that also focuses on contemporary events, is ruled out since it requires ability to control the situation. And survey as such wouldn't be enough to answer to all the research questions. (Yin, 2009, p. 8) At first the research was meant to be conducted as action research but the inability to control the situation, the schedule of the research and the sheer scale of the study rendered this method useless. The case study is bound to theory by approaching the research in design scientific manner. The intention is to theorise the designed change management model with the case study and justify its use if possible.

As Yin (2009, p. 3) suggests, case studies should always start with rigorous literature review. The research of this thesis indeed has begun with literature review in the two previous chapters. It is crucial to know what other researchers have found out about the subject before stepping into research (Saunders et al., 2003, p. 44). It is not relevant, though, to stop the literature review in one point and then proceed into data gathering. The literature is referred to when needed during the case study. Saunders at al. (2003, p. 46) also maintain that it is better to know just the guidelines of the research subject rather than knowing it in detail in order to stay uncontaminated from other researchers' views. This is relatively easy especially considering the topic of change management since every change situation is unique (Newton, 2007, p. 10). Literature was analysed to be able to create the change management model. This approach supports the design science method. It first builds and evaluates a model (in this case) and later of theorises and possibly justifies the model (March & Smith, 1995). The building and evaluating affects the study's propositions that are used in the case study.

The literature sources were selected first by convenience. Search was conducted in internet search engines and university library search engines with topics such as *change management*, *organisational change management*, *process management* and *business process management*. The physical books were both borrowed and bought when felt needed. Digital sources such as journals in Portable Document Form were accessed

through university internet connection in order to gain broader variety of sources. During the literature review new sources were gathered under subtopics presented by initial sources to gain deeper knowledge of research in the field and competing views.

The main source of failure in case studies is lack of systematic and disciplined procedures to study the phenomenon (Yin, 2009, p. 14). There is a strict need for openness in the literal presentation. The reader needs to know that the evidence isn't biased anyhow and that all necessary evidence is gathered in the first place. This is addressed to by creating the study around five components of research design:

1) Study's questions
2) Propositions of the study
3) Units of analysis
4) The logic that links data to the propositions
5) The criteria for interpreting the findings (Yin, 2009)

Study's questions were presented in the first chapter of this thesis. The target of the study is to find out how changes in an organisation like that of Cargotec's should be led in practice. To find that out, the questions were formed as they are. The case study is not for general purposes, since there are vast numbers of books written about the subject and they show clearly the shortcomings and basic needs of change management. The driving force for the study is to find out the specific needs in Cargotec's organisation. This is to address the individual characteristics of an organisation. The individuality of organisation reduces the generalisability of the findings of this study outside Cargotec.

Propositions are described as directive assumptions that guide the researcher to ask right questions. It is not enough to have the study's questions explicitly stated. What is also needed is the rationale of what is assumed to be the correct way of doing things and what needs to be done in order to find out whether the proposition is true or false. (Yin, 2009, p. 28) The propositions of this study are mainly done reflecting the theory and concepts phase of this study (chapters two and three). For the first research question of what is needed from the change process, the proposition is that the process should proceed systematically as it is done in most theoretical models of change management, it should identify the needed stakeholders and it should be planned according to the nature of the changes. How this should be actually done is the actual problem this study is about to solve.

Question of how to improve the feeling of control over change isn't quite exactly found in the literature. What can be proposed though is that to improve the feeling of control, the one that is leading the change should possess the needed characteristics of a good leader (Goleman, 2008, p. 81). This is for the reason that the leader should be able to get all the needed information from the company in order to know what is happening and giving out clearly defined tasks for the stakeholders. It all depends on clear

communication, defining responsibilities, identifying individual tasks and setting clear targets (Litre et al., 2011; McKinsey, 2010b).

Stakeholders are clearly needed when leading change according to change management models. The problem is to clarify how much stakeholder participation is needed during different phases of change management and on different levels of organisation. It is proposed that on each level of organisation, the lower levels should be consulted in order to get a clear view of practical problems inside the organisation. By engaging people throughout the organisation, the main steps and resource needs of the change can be reasonably well planned in advance. What also should be remembered is that the participation isn't a one-off task but should be maintained throughout the lifetime of the changes.

It is also proposed that changes can be approached as processes. There are certain milestones and responsibilities in managing change and it is to be tested whether the conceptual model created in previous chapter is valid. The change is seen to go through a series of phases which supports the idea of process thinking. Testing is done by looking at the actual decisions and phases in the change and comparing them to the model. It is then discussed whether the decisions were right or not and whether they followed the change management model or not. If the decisions don't follow the model and are proved to be right, it is to be discussed whether the same results could have been achieved when following the model – and vice versa.

The unit of analysis determines what the case is in this study, that is, the phenomena to study in the surrounding environment. (Yin, 2009, p. 29) The unit of analysis in this case would be the planning and initiating of organisational change on different levels. It covers the decisions made at the top management level, how they are transferred through mid-management to key-user level. These organisational levels in this study will be explained in detail further on. The aim is to understand how the change can be managed from top-down so that all needed information is transferred throughout the organisation and how to establish a channel for the information to flow from bottom back up in case of emergency. What is also studied is how the change proceeds inside the organisation and how it is planned. That is, find out the steps how to push the change from management ideology to practical use.

The case study design represents a single case study with embedded units of analysis. (Yin, 2009, p. 46) The embedded units in this study are top-management, mid-management and key-user level. They all work individually on daily basis but should, in terms of study's propositions, consult each other during the changes. The context, in which these units of analysis are, is daily business done alongside the organisational change within Cargotec. The case and its units of analysis can't be separated from daily business. The phenomena around the organisational change and the progress of change are followed from the design phase to hand-out for key-user level. That is, for example

covering the decisions made how and where the changes are to be presented, who is in charge on each organisational level and how the communication works and how decisions are made. The local implementation on key-user level is followed for some time, but the intention is to gain knowledge how the change should be managed in order to succeed in the local implementation. That is, finding out the prerequisites on each level, in terms of planning the change and selecting key-users, before handing the task out to next level of organisation.

The research is located mainly in Tampere but the change is spread along the organisation and its various locations. The people within the scope of the research are those who own the processes that are to be implemented, those who own the resources of the particular parts of the organisation where the changes are to happen, and those who are in charge of the actual change management on key-user level. The study doesn't dig into all the personnel affected by the changes since the number of observable people would be out of reach of an individual researcher. Thus, only those who transfer the change from management ideology to practice are in focus. It is not intended either to follow all change management initiatives in the organisation, even those of similar manner. The same kinds of changes happen in various geographical locations and also in different parts of organisation. But for the sake of narrowing the scope and still being able to generalise most of the findings, the focus is in Tampere. It helps also in data gathering.

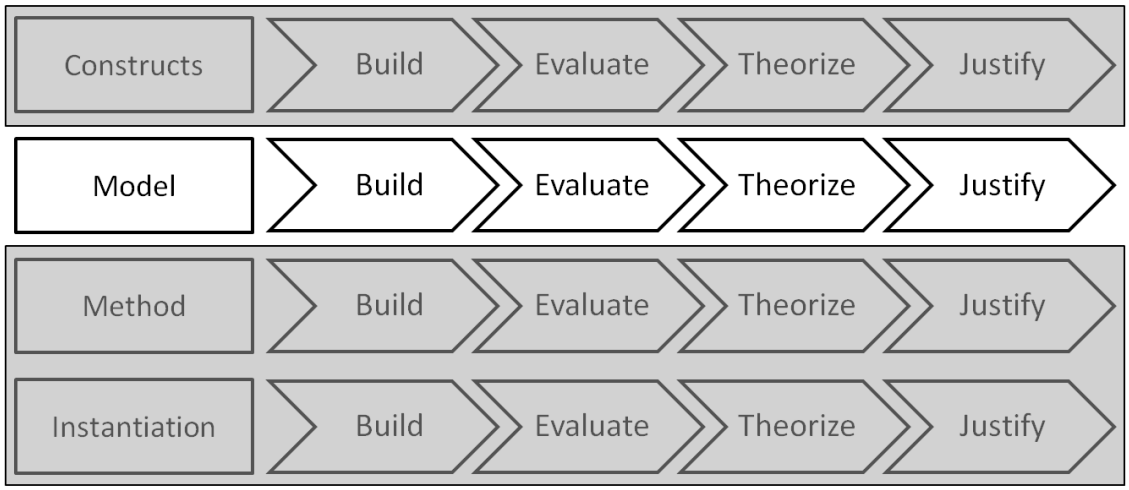

Figure 4.1Design Science Research Framework (March & Smith, 1995, p. 255)

The framework that is used in the thesis is March & Smith's (1995) design science research framework (figure 4.1). The framework can be used for achieving four kinds of research outputs: constructs, models, methods and instantiations. Amongst these possibilities, model was the most appropriate output to seek for in this study, since it is about representing the situation as problem and solution statements. Constructs are for

constituting conceptualisations used for describing problems and specifying their solutions. (March & Smith, 1995, p. 256) This can be seen as too vague an approach for change management studies. The authors continue going deeper in the outputs by presenting the methods. A method is a step-by-step approach of performing a task and instantiations are realisations of constructs, models and methods (March & Smith, 1995, pp. 256-258). These outputs are then ruled out by their strictness. They are useful outputs in an environment where design science have been developed, namely Information Technology research but are too absolute for phenomena around change management which consist of complex social interactions.

4.2. Achieving Good Quality of Research

In order to achieve good quality in case study research Yin (2009, p. 40) suggests attention to be paid on construct validity, internal and external validity and reliability of the results. The needed actions are listed in table 4.1 below.

TESTS	Caste Study Tactic	Phase of research in which tactic occurs
Construct Validity	▪ Use multiple sources of evidence	Data collection
	▪ Establish chain of evidence	Data collection
	▪ Have key informants review draft case study report	Composition
Internal Validity	▪ Do pattern matching	Data analysis
	▪ Do explanation building	Data analysis
	▪ Address rival explanations	Data analysis
	▪ Use logic models	Data analysis
External Validity	▪ Use theory in single-case studies	Research Design
	▪ Use replication logic in multiple-case studies	Research Design
Reliability	▪ Use case study protocol	Data collection
	▪ Develop case study database	Data collection

Table 4.1 - Case study Tactics for Four Design Tests (Yin, 2009, p. 41)

Data collection and analysis are presented in respective subchapter below but external validity can be addressed to here. Since there is only one case with embedded units of analysis, the only way to ensure external validity is to base the findings on literature. There are numerous explanations in literature for different phenomena in change management and it is up to data analysis to interpret the findings and cross-check them with literature sources. How the data will be analysed is discussed further on.

Construct validity is addressed to by gathering data from multiple sources and creating a chain of evidence. This is done for the reason that the data collected would be of best possible quality and to prevent biases stemming from individuals' views. Internal validity is ensured by analysing the gathered data explicitly in as many ways as necessary to create credible explanation. Reliability is result of rigorous case study protocol and data collection. It means that if case study is reliable, the same results can be achieved by some other researcher by following the same kind of case study protocol. (Yin, 2009)

4.2.1. Gathering Data

Rigorous case study protocol is a major contributor to the study's reliability. The protocol should describe the overview of case study project, including field procedures, case study questions and a guide for the case study report. A rigorous protocol keeps the researcher attached to the core of the phenomenon at hand. (Yin, 2009, pp. 79-81) The data is gathered by being part of the work community and serving as a consultant in change management. All of the data is gathered by direct observation attending meetings where the approach to change and practices are discussed.

This study's objective is to find out how change management is and should be performed in practice in an organisation such as Cargotec. The organisation is described in detail in next chapter, the background of the change management project is further detailed and the individuals and groups participating in change are described. The names of participating personnel are not announced since it would not serve any specific purpose. The intention is not to investigate differences in individuals' opinions or actions but to study the change management procedures and specific needs related to them. The organisation levels are described though, as are the titles of different people, but since this study will be also available outside the company, the individuals stay anonymous.

The research questions that are presented in the introduction chapter will serve as guidelines for further questions. Yin (2009, p. 87) points out that the research questions are not the same ones that are asked during interviews but need elaboration. Since there is no specific interviews during the case study phase the questions asked will be presented in the reporting phase when analysing the data. The questions try to dig deeper into the foundations of different perceptions and problems and thus help understand the outcome of actions. The analysis then tries to answer to the question that would the outcome be exactly the same if the actions had been perceived by some other person with different opinions. The intention after all is to study the change management and phenomena related to that and not to focus too much on individuals.

Gaining access to data is relatively easy since the study is conducted being part of the work community. The access to data on the higher levels of organisation is partly

restricted though. Main data collection method will be observation as participant. Notes will be written during the whole participant observation phase of the study and informal interviews are done in all the meetings that are held to help understand the decisions related to the change. Notes will not be published separately in this thesis, but data will be explicitly presented and scrutinised in the case report further on. The reason for data collection as being participant observer is the nature of the research. The strengths of this data collection method are that it covers the case in real time in its context and it is insightful about interpersonal behaviour and motives but on the other hand the observations can be biased, participant observer can affect the events and there might be problems covering all the events (Yin, 2009, p. 102). In addition there will be access to some documentation related to the processes and change management. They will be referred to in the report when necessary. Archival records or physical artefacts are not used even though they are credible and useful as case study sources of evidence (Yin, 2009, p. 102).

There will be multiple sources of evidence when observations are done on different levels of organisation. There are multiple persons in scope on each level which hopefully enriches the observations. In addition to observing all different levels, interviews are conducted and documents can be used. In single case studies with embedded units of analysis the researcher needs to keep focus in all embedded units. The major pitfall in these kinds of studies can realise when researcher focuses only on one unit of analysis (Yin, 2009, p. 52). To downplay this pitfall the research is done as participating observer on some extent in each unit of analysis. The report will keep discussing differences among different units of analysis, meaning different organisational levels. The viewpoint mostly is from lowest (within the scope of the study) level of organisation, since most of the participation is with these groups of people. When analysing evidence, it will be explicitly presented and further scrutinised in order to be as unbiased as possible. Analysing methods are described later.

The case study report is the main form of case study database. There will be notes written during the research that will not be published. The reason for not publishing the data is the confidentiality and because all relevant evidence will be discussed in the report. The idea behind case study database is that it will be used in maintaining chain of evidence (Yin, 2009, p. 123). Maintaining the chain of evidence increases the reliability of information in case studies. The reader should be able to follow the progress of the study from its questions to the conclusions made. (Yin, 2009, pp. 122-124) This will be ensured by depicting the reality as accurately as possible and presenting the evidence following the timeline of actions in order to ease the reader’s journey through events.

4.2.2. Analysing Data

The data needs to be analysed in order to draw conclusions from the findings. Case study data analysis isn't as mature a subject as is the case with statistical analyses. It is thus mainly up to the investigators own style of empirical thinking combined with presenting evidence and finding alternative interpretations so the reader is able to draw own conclusions also. (Yin, 2009, p. 127)

Four general strategies for case study data analysis are presented by Yin (2009). The researcher can rely on *theoretical propositions*. This is mainly the approach that is used in this study. The propositions have been already presented and will be further discussed later on in the case report. Since the data is gathered from one specific case it is basically compulsory to rely on theories. If the situation is new or otherwise unique, one could rely on *case description*, which would assume the proceedings of the phenomena and compare the actual findings with the self-written assumptions. These two different methods are mutually exclusive and only the former will be used. The third strategy is to use both *qualitative and quantitative data*. Since the case to be studied consists of one-off situations, quantitative data isn't available in a greater extent. Mostly the data to be gathered is qualitative. The last strategy, *examining rival explanations*, is useful for this study. In any occasion observed data is presented in the report, conclusion is sought through explicit rigorous analysis by examining rival explanations to events. It is important to try to find evidence for rival explanations if possible. If no evidence is found, the explanation can be ruled out. (Yin, pp. 130-136)

There are also five analytic techniques to complement aforementioned strategies. Those are *pattern matching, explanation building, time-series analysis, logic models* and *cross-case synthesis*. Cross-case synthesis technique is typically used in multiple-case studies. Since this thesis focuses on one case only, that technique can be rendered useless. Pattern matching is best made when there's possibility to compare multiple cases. It can be used though to find same types of patterns from similar studies or from theories. Explanation building is described as a form of pattern matching and it will be used since the aim is to have an explanatory study about organisational change in its context. What separates explanation building from mere pattern matching is that it might find some out of the box explanations for findings. It is warned though that explanation building easily gets distracted from the focus of the study and the researcher must keep in mind the original focus of the study. Time-series analysis will not be used in detail since there is no possibility to focus on smaller scale phenomena to study how they evolve during the changes. The intention of this type of technique is to find out what kind of effects different decisions have in the long run. There's not enough time or resources for this kind of research. The last of the techniques, logic models, is a sequential way of matching predictions and actual events. The way of analysis is to predict how an event will affect in the future and see if the prediction was right or not.

This technique will be used during research when applicable and results discussed in the report. (Yin, 2009, pp. 136-160)

5. STUDYING THE CHANGE

5.1. History and Overview

Process Development Initiative in Cargotec has started in August 2009. Its intention is to support transformation from clustered company into one entity with similar way of working across the world. This thesis focuses on one part of the whole initiative, implementing Develop Offering processes. The name of the process area depicts its purpose - processes that are intended for developing offering for future needs and developing present products to better suit customer needs. This change is started in one part of Cargotec Corporation, in Industrial & Terminal business area. There will be similar changes in rest of the organisation later on.

Develop Offering -process is a main process which consists of three sub-processes: Develop Future Offering, Develop New Products and Perform Product Lifetime Care. Future offering process will focus on the needs of customers in a time span of roughly five to 15 years. It mainly focuses on technology research, innovative solutions of transportation and studying the trends of material handling and logistics. This process then gives out new technologies and ideas to be further studied in Develop New Product -process. Developing new products is further divided into two phases. First new product idea is tested by developing concept. That concept, when it is confirmed to be applicable and needed in market, is then fed into actual new product development phase. That phase then creates a completed and refined product out of the concept. When the product hits the market it is being taken care of and further developed by Perform Product Lifetime Care process, until the product is terminated.

The need to have similar way of working, similar processes in other words, stems from top management of the company. They want to ensure that investment money yields proper results and want to know how company resources are used. When all projects, which aim for producing something new for company offering, are handled the same way and provide information for management in the same format, different projects can be prioritised. That ensures that new projects are started when there is market need for them and company has resources to see them through. In the long run it is also hoped that the company would get even better in choosing right projects and managing a comprehensive array of well-selling products.

There are other changes made prior to the Develop Offering implementation that are firmly related to all of its sub-processes. Namely, there is a new project model which will be used by aforementioned sub-processes. The new model ensures that every

initiative in the organisation which craves more than a certain, predefined amount resources in terms of personnel or money is handled in similar way. That means, nearly 100% of all new product development projects will be handled according to this new project model. Some but not nearly all of concept projects exceed the set resource limit and need to be run as projects as well. The product lifetime care is phased just as the other projects but it doesn't use exactly the same set of template documents and operative governance model.

The process ownership is quite straightforwardly structured. There's one owner for the main process, Develop Offering on Cargotec level. Each one of its sub-processes is also owned by a single individual. These owners work alongside these responsibilities in other positions in the organisation, meaning the ownership is not a full-time job. These positions are hierarchically distributed. That is, the main process is owned by a higher rank than its sub-processes. The highest position in this structure is process sponsor, one level higher than process owner. To clarify this idea, we can combine the hierarchy of the processes with that of Laamanen's (2001, p. 37) presentation of processes that was introduced in the first chapter. The top management, the sponsor level, is interested in achieving the vision of the company, the next level, process owners, is thinking how this is actually done and the lowest level, local people, find out how to implement the processes into their daily business. The process organisation can be depicted as a virtual organisation interested first in the implementation and later on the performance of the processes. The positions from the sponsor down to sub-process owners are global. The hand-out when implementing the new processes happens from the process-owner layer down to local deployment manger. Local deployment manager is a role responsible of the local implementation of the processes and further improvement.

The process organisation is not the same as the business organisation. The local deployment managers are chosen from local business organisations. That poses a risk for the implementation since the resources, meaning the personnel, are not owned by the group interested in implementing the processes. In ideal state when the new processes are presented for business organisations there would be a pull-effect in terms of management interest towards the processes. If the buy-in isn't achieved in the management level, the change will not be prioritised high enough to get resources, thus having low expectation of success.

To be able to get this buy-in from different business lines, the processes have been developed by Process Development Office. It is an organisation which consists of process specialists who have mapped the processes together with various parts of the company - parts, which have vastly different background in terms of how they have operated previously. The reason for gathering broad base of feedback was to check that processes would be applicable to differing environments and get innovative ways of working into the processes. This is to ensure easier buy-in when implementing the

changes and for creating innovative, best-practice processes for the company. These processes will still be further developed after implementation.

5.2. Preparations and the Kick-off

The process implementation starts from Tampere and the case study focuses on its organisation structure. The findings can be generalised in similar contexts. That is indeed the intention of the study, since other parts of Cargotec are similarly structured and the process organisation is globally the same. This report will go through chronologically the actions affected to the implementation of Develop Product Concept, Develop New Product and Perform Product Lifetime Care -processes in Cargotec Industrial & Terminal (I&T) organisation in Tampere.

The processes were affirmed by process owner and sub-process owners in January 2011 and the creation of material for the kick-off of changes began. Prior to that, the processes had been fine-tuned and tested in late 2010 with various persons who work in similar processes. The tests were done with imaginary cases or products already developed and in recent memory since product development projects normally last approximately two years. It is way too long time for a pilot reflecting to the pace the company wants to reinvent itself. The processes could then be accepted and stated applicable.

Before the kick-off, it had to be determined how the changes would be rolled out into the company. There are various locations globally that need to adopt these new processes and very limited personnel for the roll-out. By now mostly people from Process Development Office, the sub-process owners and main process owner, project management and some key-personnel from the company had been using their time for designing the processes and material for educations. From the kick-off on the persons affected with the changes would multiply dramatically.

The reason for this thesis was to gain insight how the changes would be rolled out into the company and utilize this insight in coming roll-outs. The success rate of corporate-wide changes is not too good (McKinsey, 2006). The first sketches of change management model were presented to the process sponsor, process owner, sub-process manager and project manager in December 2010 and the refined model which is presented in the third chapter of this thesis was presented in January 2011. The exact model was presented also for a person who was in a key role in another change project done in Cargotec during year 2010 and the idea incorporated in it was approved.

This change management model stretches through all of the study's units of analysis. The model, single layer of it, is the same on each and every level of organisation but the approach to change might be vastly different on these levels. The change affects differently on each level and should for that reason be assessed accordingly. Figure 5.1

presents Laamanen's (2001, p. 36) operating system, Litre et al.'s (2011, p. 7) change management structure and both the actual organisation and process management virtual organisation linked.

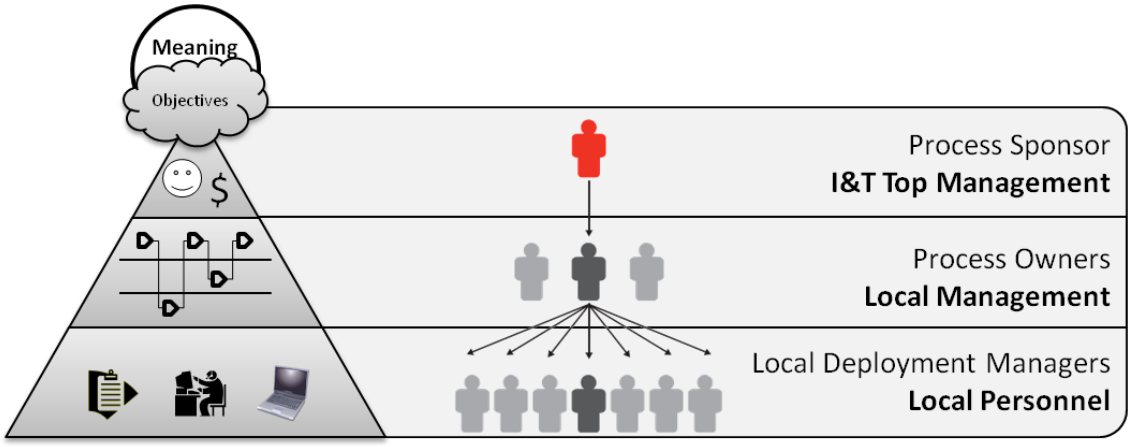

Figure 5.1 - Operating system, change management levels and organisations linked

Litre et al.'s (2011, p. 7) picture just by chance presents the situation as it is - the change in this case is clearly top-down led initiative. It is not something that would have been asked for by employees. Not that they would not like it but they most probably would not come up with the idea. The interest to see that the changes realise should thus be on process sponsor and I&T top management. It should be passed on to process owners and local management who then see that it is implemented by local personnel with the help of local deployment managers. This was accepted as the approach to be used.

The sub-process owners, project manager and the process owner had their presentations ready in mid-January 2011. They were checked and fine tuned for the I&T kick-off meeting that was to be held on 7th and 8th of February. The presentations were specially done for the target audience which consisted of Industrial & Terminal management and Research, Development and Engineering (RDE) managers from different locations globally. The intention was to get people introduced to the processes, explain how they were created and tell a little something about the implementation plan and the schedule. At this point the participating people couldn't have learned the processes in detail. It was to be done at a later date in an event called *Train the Trainers*. The general atmosphere in the meeting was uplifting. The end speeches by various managers from different locations greeted the new processes with open arms.

The first Train the Trainers event was held in Tampere for Port Cranes organisation in the end of March. There are personnel in Tampere also for Cargotec Corporation and for other product businesses but they didn't participate since being out of scope. The participating personnel consisted of RDE, sales, services, sourcing, prototype workshop and production, product owners and project management representatives of Port Cranes division. Only a few of the participants had been in the earlier I&T kick-off event. The

training took three days. The first day started with an overview of the project on a larger scale and its purpose. It presented how this working model would support the product and project portfolio management of the company by enabling transparency of actions with equal working methods. It was emphasised that this change comes from the Customer Focus Board of the company and is supported and driven by the top management of the company. Change management was the next subject after the introduction. The change management model presented in chapter three was presented. It was quite theoretical approach to change management but it presented the main ideology behind the model and how it should stretch through the company also vertically and how the way to handle changes is iterative on each layer. The communication and leadership was stated to be the highest priority if the change was to be successful.

The work of Process Development Office was presented also during the first day. Explanation of processes was also needed to ensure everyone knows what the trainings are about. Earlier the same year, there was an engineering event held for the Tampere RDE and after a rough presentation of processes someone raised his hand to ask what processes even mean. The PDO presentation was to show how much work has been done to create these processes and how the differences between divisions have been taken into account to create a common, best practice working model. The process organisation and business organisation were showed together in parallel and explained how the governance of processes works. The presentation proceeded to explain different phases in the roll-out of changes. The event itself was a local start for the changes. The following steps were to train local key-users and then the rest of local process users. It wasn't yet determined or discussed how that will be done in practice.

Portfolio management was the last subject of the first training day. It was presented by the implementation project manager who is also the director of Business Portfolio Management. The presentation emphasised the need of similar processes and the newly started project model to ensure equal judging of proposed projects, handling better the ongoing projects and resources they require, and maintaining a balanced product portfolio for Cargotec. It also explained the governance of projects, when issues are escalated to a higher authority, on which basis the projects are started or ended prematurely and so forth. This was all to underline the need for the change in the present way of working. It was a clear message from I&T management.

The first day was intended to increase the readiness for change and create an enthusiastic atmosphere among the listeners. The level of detail did not confuse the listeners too much and the first day's intentions were quite well achieved. The next two days then dug into the details of processes. No actual process maps were presented to listeners before they were explained by sub-process owners. The presentations proceeded chronologically following the main process. There was no presentation for Future Offering process though since its audience is actually division management and

business development and thus the day two started with Develop Product Concept process. The process is a prerequisite for Develop New Product process which was presented right after. The third day was devoted to Perform Product Lifetime Care process, Sourcing presented their contribution to the new processes and in the afternoon there were workshops to gain insight of how big a project it is to implement these new working methods.

Develop Product Concept was something new for Tampere personnel. Traditionally there have been only quick pre-studies if anything. When the processes are fully implemented the intention is that every new product goes through the concept phase if ready business case of the product isn't available. This way it is ensured that no rock is left unturned when choosing the technologies for the product. This is a fundamental shift of mindset at Tampere. The idea raised a lot of discussion but it was well accepted. A predefined template to be used in developing a new concept was also presented. The name of the tool is *Idea Passport*. The participants had a workshop for using the passport and after the workshop feedback was gathered for improving the passport's usability. The maturity of the tool was still mediocre yet it covers most of the subjects that are fundamentally needed. The outcome from this process is a preliminary project charter that will be used when starting new product development. Project charters are included in the newly established Project Model.

The preliminary project charter acts as input for Develop New Product. This process can be started with a ready business case as well. Business case describes the function of the product, its features, market areas and such which are enough for developing a new product. This process is more familiar to Tampere personnel but its scale of cross-functionality was something new. Since, previously it wasn't the case with all new product development projects. Some projects had been done in close co-operation with different stakeholder groups within the company but not to the extent that the process depicts it. New product, as well as concept development, projects follow the Process Model and the progress is checked at certain gates for the project to move forward. The sub-process owner's education bound the project model and new product development process tightly together. There was also a workshop where the process was gone through with an example to concretise the matter. The day two ended up in concluding remarks by the main process owner. There was a lot of information for one day and the educations only scratched the surface of the peculiarities within the processes. The educations were made to simplify the idea and let it incubate among the listeners. The process maps then would make the case clearer when the local implementation really starts.

The morning of the last training day started with presentation of Perform Product Lifetime Care process. After it, sourcing had a short one hour presentation, and in the afternoon there was a presentation from Process Development Office and a short workshop preparing the implementation work. Lifetime care process aims to correct

problems or gain improvements in already launched products that are sold. This kind of work is already performed in Tampere but the way people are organised in the process was redefined. New method for prioritising issues was also presented and it was practiced during the education. People noticed that the scoring of issues raises discussion and the presenter reminded that it was indeed the intention of it. Problems were scored with five individual factors and improvement suggestions with three, scores ranging from zero to three. Determining the value for each individual factor is a matter of discussion and finding a consensus. The process phase got a nice reception and it was seen to fix some obvious problems in the present way of working.

Sourcing had only a one hour slot during the last training day. The intention was to show new processes of sourcing that have been developed alongside the process development supporting the new processes better. These processes are not implemented per se but are rolled out through sourcing organisation in Tampere. The presentation shed light on the possibilities that can be harnessed through cross-functional operations. It was more of informative sort rather than educative.

Latter half of the day was devoted to Process Development Office presentation of how to proceed. The local deployment managers were announced in the presentation. It came somewhat as a surprise to the people nominated. It was later on corrected that in forthcoming presentations in other locations the deployment managers got nominated before the training. That way they would concentrate on their process area better. The process maps were presented in their most rigorous form and people were told how to read the maps. The symbols, their meanings and the order in which the map would be read were educated. There was a short workshop in the end that started the so called gap-analysis. The participants were told to go through the process maps and identify gaps between present way of working and the process. The workshop showed how difficult it is for people to jump from practice to theoretical presentation of work. During the, a little short of one hour workshop the groups didn't proceed too much. The actual work was left for the future meetings concerning the implementation. The day ended in Process Owner's conclusions and thanks.

The I&T kick-off as well as Tampere kick-off were meant to raise awareness of the processes and show that there's a lot of work put behind them. How well the initial I&T kick-off achieved the buy-in of the idea is hard to measure. The Tampere kick-off itself seemed to raise a lot of questions but also some hope for the better. The actual implementation of process changes started right after the Tampere trainings. The organisation from Process Sponsor to Local Deployment Managers was formed.

What had been done from the beginning of February to the end of March:

- The new processes had been educated to I&T and RDE management on a higher level

    - A rough timeline for the changes had been presented
    - The idea of one way of working through harmonised processes had been communicated
- The first *Train the Trainers* event had been held in Tampere
    - The phases in the processes were educated in more detail, not the actual tasks yet
    - Few workshops were held during the educations to understand the peculiarities of the processes
    - Local deployment managers were nominated and timeline for changes was told

The next step was to start implementing the processes in Port Cranes Tampere organisation and start to understand what the changes mean in practice in the local organisation.. The two top layers in figure 5.1 had proceeded to the execution phase in the change management model - in theory.

5.3. Starting the Changes in Tampere

The left hand side of figure 5.1 presents the units of analysis for the case study. The business organisation affected by the changes is presented in bold letters and the virtual organisation as normal size. There are two local deployment managers in Tampere who work with local personnel. Local personnel consist of selected key-users of the processes. They provide the needed insight of actual work problems and solutions when situation needs to be understood, the approach chosen and so forth - when going through the change management model. One local deployment manager is responsible for the local implementation of Perform Product Lifetime Care process and the other for Develop Product Concept and Develop New Product. The former of the processes is seen craving less work and resources than the latter two. Neither of the local deployment managers was familiar with change management or organisational development as such. They both had their first touch to the processes in the Tampere kick-off. Basically they were on the same line as other personnel in Tampere in terms of knowledge of the processes and how the implementation should proceed. The first task was to deepen their understanding of their relative processes and about implementation of them.

In order to bring the local deployment managers to the level of knowledge that they would be credible presenters of the process change intentions it was necessary to have a start-up meeting with them. The first meeting with product care process deployment manager was held on 1st of April, the other deployment manager was briefed on 4th. Product care process was gone through in its entity and we had a look on its supporting processes. Responsibilities of different roles were the first on the agenda. This was done in order to be able to choose the right people for the group to plan the implementation - to name the process's key-users as stakeholders. The first meeting with the new product

and concept process deployment manager was just an overview of the processes and how they relate to project portfolio management of the company. The stakeholders weren't formally discussed yet of those processes.

After both local deployment managers had identified the stakeholder groups inside the organisation, they sent an e-mail invitation for a local kick-off meeting. Product Lifetime Care didn't gain enough attention at first invitation attempt so it had to be postponed by one week. Even then, the participation to the meeting was quite poor. This indicated that the project, which wasn't an official project yet, didn't have enough gravity in the organisation. The participation in concept and new product development meeting was much better. This might have something to do with the person in charge. The person as local deployment manager for concept and new product processes has co-operated with various parts of organisation before whereas the product care deployment manager not in the same extent. Nevertheless, both meetings had the intention to explain the processes to the participants, since not all of them had seen or heard about the processes before. It was also to familiarise the participants with the issue and gain interest in implementing the processes into practice. The atmosphere in both of the meetings was quite calm. People seemingly understood that the changes are needed and direct actions in the right direction but were worried about the resources that would be tied to the project. At present all of the time went to daily business related tasks.

After the first concept and new product development meeting, it was hoped that every stakeholder would go through the processes on their own and find out if there is something they don't understand or don't know how to do. In the first meeting we had shown the process maps, explained the symbols and given the access to the web-portal that the process maps are found in. For the product care, it wasn't until after the first meeting that all stakeholders had been identified. We sat down with the local deployment manager a day after the first meeting and started writing down the needed persons for the implementation. It became clearer to the local deployment manager that he is not responsible of finding all the solutions regarding to the process, its roles and functions in the organisation. He would be helped by the people that are chosen to the stakeholder group, the key-users.

Now that the stakeholders had been identified, the intention was to spread the workload. A template for change management was created. Its purpose was to gather role-specific information about the differences in the daily work and how the process maps depict the work. The data, meaning the filled documents, were gathered on a team-site. Filling the documents took a lot of time. It was partly due to the descriptions in the template - they were rather ambiguous. The descriptions were rewritten and instructions how to use the template were sent on a later date to ease the work done by the key-users. Some key-users were so overbooked in terms of work that they simply didn't have the time to fill the documents or concentrate on the processes. The process maps were quite hard for some to understand. On top of poor understanding of the process presentation, the

progress was hindered by ambiguous and sometimes missing descriptions of tasks within the process. The inadequate descriptions were the result of too little time devoted to process mapping and fine-tuning by sub-process owners after the process maps had been signed by the process sponsor. The sub-process owners were hands full with their daily work.

After all, the change management reports were done for the concept process except for a few roles but only three reports out of eleven possible were done for product care. No reports were filled for new product development process. That was because; new product development process wasn't started with in the beginning. Nevertheless, the approach to understanding the impact of change had to be altered. We had various meetings with both groups, whoever attended the meetings, and we came into conclusion that this was not the way forward. Nobody seemed to have time for filling the documents, only some had the time to attend the meetings and local deployment managers started to feel frustrated about the progress. Hitherto most of the progress in understanding the impact of change for concept process had been done during the meetings. The progress made with lifetime care was achieved by visiting the stakeholders individually and having a little of their time. The struggle to understand the needed actions continued from early April to end of May. There were a number of meetings, none of which brought the project nearer to completion. All meetings ended up to discussions if the meanings of tasks are understood correctly and most of the time there were talks about computer programs to help guide the process. New templates were needed for data gathering in various process phases. It felt like the implementation project was a chaos and something needed to be done to gain control of the situation.

In the end of May I had a meeting in Helsinki with Process Development Office. We went through the model they had presented for implementing the processes. It followed the typical change management models - also roughly the same with the model that has been developed in the theory part of this thesis. During the discussions it became apparent why there are difficulties in implementing the processes. It all boiled down to the resources and thorough understanding of the changes. Even though the local deployment managers could get the resources they need, they didn't know how strictly the processes have to be followed, whether they could incorporate a tool implementation into the project and so forth. There was little to none discussion with the local management of the ambition level of the implementation. What would be the concrete outcome of the process implementation? That is the basic prerequisite needed for understanding the situation (Newton, 2007). McKinsey (2010b) survey also states that in order to succeed in change, ambitious and clear goals must be set. Now there were only ambitious goals but they weren't clear. There was little to none discussion between sub-process owners, main process owner, local deployment managers and local management about the goals. Local management couldn't state the goals since they didn't know what the ambition is on I&T level.

The approach was changed in mid-June, according to the Process Development Office model, so that there would be a meeting to analyse the fit of the process at first. Analysing the fit means going through the process map and stating whether a task depicted is done in the organisation or not. What was also investigated was how the information between roles and their tasks flowed. That mapping was done for lifetime care and new product processes during one meeting. It showed that progress can be made once the approach is right. During the meetings it was also noticed that some information flows should be systematised. Present way of delivering information was mixed. Information was transferred by phone calls, coffee break discussions, e-mails, etc.

With this information a project charter could be written. It is a part of the project model. Projects start with a charter that is needed for approving the project by the decision body. The decision body is determined by the magnitude of the project. I&T level project charter was also made. New product and concept development process implementations at Tampere were one sub-project and so was the lifetime care process implementation. Now the local deployment managers could start writing their project charters. They were written with the best available knowledge of the ambition level and the local deployment managers had a chance to ask for what they needed. The charters were to be approved by the decision body after all and they hold the resources that are needed for the implementation. It took a couple of meetings with the deployment managers to write the charters for the two projects after which two meetings were held with the named project owner - one meeting for each project. The project owner was an RDE manager in Port Cranes organisation. There was a lot of discussion of the ambition level during both meetings. The charters were modified a little in terms of the project's scope and dates for various milestones. The concept and new product development implementation needed also another owner since the project claims resources from two organisational units. The management meetings defined some of the dates. It wasn't known by the local deployment managers. The dates were updated, scope refined and the charters given to the project owners for approval.

Now there was hope for the resources for the project. And since the implementations would now be done as projects they would be reviewed at some point. There had been no official reviews to find out whether the implementations had any problems. The deployment managers were worried about their own time and expertise. The Sirkin et al.'s (2005, p. 5, appendix 1) score for integrity was the worst for both deployment managers when tested. The score depicts the change manager's (in this case local deployment manager) capability and credibility. Overall scores were 15 for concept and new product development and 20 for product lifetime care deployment managers. Score of 15 gives reason to be worried about the success and 20 means the change is already likely to fail. These scores were measured only once, so there's no statistical significance behind them. Nevertheless, they give a hint of how likely the changes are to

be successful. Actually, the scores reflected the observations made during meeting with both of the local deployment managers and their stakeholders.

The observations for this study ended at the charter creation. Now there were charters for both projects under a bigger I&T level project. The work continued to provide needed data for the next phase in the project model - to create a plan. Plan would include all the same information that was in the charter topped up with updated and in detailed information about resource needs, actions to be done and a work breakdown structure to show what actions are done and when. The planning would be done by going through all of the stakeholders and gathering concrete actions that are needed in order to work according to the process in the future. The understanding of the processes was on good enough level for the stakeholders to plan the needed actions. The projects now had an official number but the charters haven't been signed yet. The work for the implementation was not done by neglecting the company rules on projects since they were not available the time process implementation commenced but now it came clear that they must now to be taken in use. So was the case for the planning as well. There was no formal agreement to continue to the planning phase. This seemed to be the problem stemming from two organisations, the virtual one for processes and the business organisation, both having slightly different interests.

5.4. Analysis

Now, the units of analysis are the three different levels of the two organisations depicted in figure 5.1.First, we try fitting the actual actions into the change management model developed in this thesis. After that, alternative explanations will be discussed and events compared with theories found in literature. The analysis is based on explicit discussion of events in order for reader to make own assumptions.

First when we look at the change management model presented earlier, or actually any model, the changes should start with understanding the situation. There must be a direction where the company aims to go. It can be a vision or a specific preferred end result. That direction was set in the I&T kick-off meeting in February. The method was to implement the changes divisionally. Port Cranes organisation was one of the divisions. At I&T level the change can be described as visionary endeavour. In Burnes' (2004, p. 325) framework (Figure 3.3) the change would be situated in Q2, where the whole organisation and its processes are in change. The suggested approach would therefore be "a bold stroke". Bold stroke would be something that is well defined, rigorous attempt at achieving the changes and transforming the organisation as quickly as possible. This view is inconsistent with the planning phase of the change on I&T level. The divisions were given relatively much freedom on deciding how the implementation should be done. On the other hand, when a company tries to achieve the process thinking, a culture change is also necessary (Rosemann & vom Brocke, 2010; Hammer, 2007). Culture changes happen through slow transformation throughout the

organisation as a whole (Burnes, 2004, p. 321). Nevertheless, the vision was set and a timeframe given when the changes should be ready in the I&T level kick-off in February, 2010.

There was only high level discussion of the timeframes, the practicalities or the ambition level during the I&T kick-off meeting. These details would be discussed later on if necessary. It didn't state that every location should have identical way of working. It didn't give any concrete requisites either. The next step towards the change was taken when the Port Cranes kick-off was held in Tampere in the end of February. Key stakeholders were invited to the event, so the first part of the change management model was dealt with. Achieving the understanding of the change was started with the educations. At this point again only the ideas behind the processes were introduced. No particular point was made on the practicalities. If there were templates to be used, they were presented. The distinct phases of the processes were introduced. It was practically about the theories how the processes should work. They haven't been implemented anywhere, so there was no real-life examples. The examples were told as how the processes should work - not how they actually work somewhere. At this point this kind of education seemed like the only option. Even with the power of hindsight it is hard to think of a better method. The intention was to help people appreciate the processes and show how they should work. The local implementation then should sort out the practicalities.

The local implementation started with more detailed stakeholder mapping. The channel of communication was established during the Tampere kick-off. It wasn't formally, explicitly established though, but the sub-process owners, process owner and the personnel working with the processes were introduced and the local deployment managers were nominated. So, the local deployment managers were aware who the sub-process owners were if they had any problems concerning the processes. The mistake that was done at this point was that the implementations were not started as formal projects. At this point there was only informal mandate for the implementation. This approach brought up problems with resources needed for the project. It wasn't realised until much later. If the changes were felt as necessary amongst the personnel and management, there's a possibility that the changes would have proceeded without being projects. Now it was not the case. The company and its personnel were full of daily work already and this change was something that was brought from outside the organisation. This is something that can be related to politicking in an organisation. The change was felt like someone else's benefit but demanding changes in action of the rest of the organisation. The part that was changing the most was RDE organisation and the business organisation needed them for creating business possibilities. The result is turf fighting and defending one's own interests.

The work on the implementation continued for a few months even though not being a project. In other words, the work was done and personnel's time used without formal

permission. During the time the understanding of the processes got better. This was noticed in the questions that first in the beginning were concerned about the process itself and after a few meetings the questions were concerned about the tools and templates that were needed in order to work according to the processes. There was a lot of frustration about the task descriptions at first. They were vague and I as a person helping with the implementation didn't know about the processes in such detail that I would have been able to help. The sub-process owners were also hands full with work and the questions so many that local deployment managers could not get an answer to their problems. They would have needed a day or two with the sub-process owners to sort out the details of local implementation. Everybody was fully booked with work. Litre et al. (2011, p. 2) have stated that it's not about minimising the effect on people but helping people through the changes. That is, the leadership in change is important. There needs to be time for sorting out the problems. It can be said that the team based change probably would have worked if the team would have known what the intention of the change was and would have understood the process in detail. In-team communication was good and different individuals' perceptions were explicitly talked about.

The teams of stakeholders gathered by local deployment managers in Tampere had stuck to the understanding phase of the change management model. There were no plans how to proceed with the changes. The problem of not doing the project plans was discussed on the I&T management and Local Management levels. Then it became apparent that formal plans were needed. The planning was started by doing project charters. With those documents the projects became formal and they would get management approval. The project's outcome was thus thoroughly explained, ambition level was determined and resource needs were stated and could then be agreed on.

The aforementioned problem stems from not handling the change systematically on every level of organisation. It can be suggested that with a little more work in understanding the vast scale of change on the top level of organisation and handing it down systematically, most of the problems could have been avoided. The change, when seen from top management point of view is of bumpy incremental nature (By, 2005). The magnitude of work needed in achieving the change can't be fully known before starting the changes when talking about organisation-wide efforts. Thus, it would have been crucial to establish a clear communicational channel in order to respond to problems as fast as possible. This wasn't possible due lack of resources. The lack of resources might have been a result of not knowing that the resources were needed in the first place. Some channel of two-way communication should have been established in order to lead the change.

The local implementation could be described as discontinuous change (By, 2005). It was a one-off effort and the aim is to transform the local organisation as one project with a clear beginning and end. There are attributes that spread across the various

locations, such as IT tools, working methods and templates that are to be used. The problem of not knowing which are division level tools and which can be determined locally arose on Tampere level. The practical solutions could not have been determined alone by local users, local management, division management or sub-process owners. These kinds of problems should have been discussed briefly on every level to gain mutual understanding of the clear goals of the implementation. This kind of discussion was missing. The change in Paton & McCalman's (2009, p. 22) change spectrum is on each and every level of organisation in the flexi/grey area. It is not only about people and it isn't purely about systems either. The IT systems don't change on top management level but they have to make the decisions or hand out the responsibility for the local management level. Taking into account both people and systems affected by changes demands rigorous communication.

Looking at the change from individual perspective on the local implementation manager level, it can't be judged as a successful effort. The local implementation managers were left to cope with the change for themselves. They were helped mostly by me as a participant observer having only limited knowledge of the processes and practically no power. What they should have had were the sub-process owner and local management support. Since the change was a top-down led initiative the implementation structure should have been built accordingly. There should be one person leading, not just managing the I&T level implementation, one person per division leading the division change and their local deployment managers. This is the structure meant by Litre et al. (2011, p. 7) and it should be built according to real life organisation's responsibilities. This structure supports the change management model and both planned and emergent approaches to change. The rapid response to problems, helping the individuals cope with the burden of change, is important for efficient co-operation (Brooks, 2003, p. 43). Again, the division management and sub-process owners were overbooked in terms of daily work.

The local deployment managers' frustration was a result of handing out the implementation responsibility for them too quickly and lack of support. Too quick handout then was a result of not knowing the effects the changes would have. The sub-process owners also had devoted time for process development and kick-offs from their already tight schedule. Handing out the responsibility was a relief for them. It wasn't a relief for the local deployment managers though. They also had business responsibilities and the change management was given as an extra task for them. Furthermore, the approach for local level was too visionary. The processes themselves are a clear goal. They can't be pursued with a vision. Yes, the company's vision may be to someday have common processes globally but the approach has to be very clearly planned on local level in order to achieve that commonness.

Referring to the change management model, the top management had managed stakeholders. The stakeholders for top management level had been chosen from all the

functions that are affected by the change. They might not all be known at first but should be brought into the process when identified. Every aspect of the change can't be handled with a vision. Some choices have to be made, and now that there was no channel of communication for those decisions to reach the management, the local changes seemed to come to a standstill. These problems would be dealt with in *understand the situation* phase of the change management model (Figure 3.4). The understanding increases along the way. That has effects for the plan which needs to be rather flexible on this level. Maybe even the method needs rethinking.

The practicality of the problems increases when approaching the lower levels of organisation. The understanding of vision decreases accordingly. This means that the local deployment managers can't set up a self-steering group for reaching the vision. They need guidance. The guidance should come from the next level in the organisation according to the change management model, or actually from anyone who can clarify what the vision means in practice. But in order to spread the load of change into the company, different levels of organisation have their own stakeholders and the communication structure should be built as described by Litre et al.'s (2011, p. 7) sponsorship spine (Figure 3.5). This way the vision gets translated to practical solutions and two-way communication is possible. Two-way communication gives better information on which decisions can be based (Frahm & Brown, 2003, p. 11). There's need not only for vertical communication but horizontal as well since some decisions need to be made divisionally.

On organisational politics point of view there seems to be no specific turf fights. It can be predicted though, that the turf fights will occur when the management of different divisions determine the tools and templates to be used. Naturally, everybody would like to use their present documents and systems in order to avoid disruptions to the way they already work. This conversation of selecting the tools, templates and so forth wasn't held during the observation phase of this thesis. It is something that will occur sooner or later.

The change on local level was in planning phase when the observation ended. Change management on top and mid levels were already in execution phase. There's nothing wrong in that but they should have proceeded to the review and revise phase. They should have proactively sought for problems with the implementation and change the approach or the plan accordingly. As Sirkin et al. (2005, p. 109) have said, there's a greater probability of success for change projects that are frequently reviewed. Then again, it has to be remembered that there has been a lack of resources right from the start of the changes. Yet, those shortcomings should have been overcome by achieving a right level of enthusiasm around the change project; enthusiasm in those who actually manage the resources that are needed for rolling out the changes. It is something the top management should have rigorously strived to achieve. It seems the need for pushing the change into the organisation had been forgotten after the I&T kick-off. Once again,

it is also possible that due to poor communication channel, the top management wasn't even aware of the problems on the lowest layer of the change management, metaphorically speaking. The lowest level is in this case the local deployment manager.

5.5. Answering the Research Questions

The question of what is needed from the change management process is answered partially in the theoretical part of this thesis. Different change management models have similar parts. They include the justification, planning, execution and verification parts. Justification can start with creating a sense of urgency (Kotter, 1996) or justifying the change by other means. Planning can be a formulation of vision to strategy or it can be a collaborative, and typically time consuming method of gathering different opinions from the organisation and creating a strict plan for achieving the changes. Executing the strict plan is quite straightforward. The execution of the visionary approach requires broad based action. Verification is done to be sure the changes are permanent. These main-phases seem to be in one form or another in all change management models. The order in which these are conducted is also roughly the same. Leadership and communication are rarely explicitly presented by the change management models since both are needed constantly during changes.

To answer the first research question the change management model was created in the third chapter. It follows the guidelines given by all the other change management models that were studied during the research. It also takes into account the organisational structure through which the changes are rolled out into the daily work. The model spreads on different levels of organisation. The changes of whole organisation are handled in the highest hierarchical layer. The next levels of stakeholders form their own change team to incorporate the views of different areas or functions. Individual views are handled within change teams and through communication between layers, problems that need attention are brought into attention of the next layers above. It emphasises the meaning of communication and leadership when handling changes. The changes go through distinct phases and the process needs to be iterative in order to capture changes in the context the change is happening in. The phases are quite indistinct prior to planning and execution. The plan can and should be made formally. The end result of changes, both visionary and concrete, should be something that can be verified. The model tries to understand the situation through open discussion that Argyris (1993) emphasises. It takes into account the different levels of change in terms of level of organisation and rate of occurrence (Burnes, 2004, p. 321). It is basically about contingency approach to the change. The changes are perceived differently by different people and each and every change project differs from one another. The leader of change must understand that individuals perceive the organisation differently, they would use different metaphor for the organisation and thus their view of how to approach the change can be very different.

In order to improve the feeling of control over changes the change manager needs to have certain goals. Before there were no plans created for the projects in Tampere, the local deployment managers had trouble in understanding what it is that they need to do. To improve the feeling further it was seen necessary to have limited peers of contact. The information gets channelled through those peers and the local deployment manager needs to control only limited number of people. This makes communication clearer and messages can be focused specifically for the interest group. Through the peers, stakeholders, the information for creating the charters and plans were gathered. The charter at first focused the project in terms of its scope, time limits, needed personnel and costs. The plan clarifies the scope even further and there's more information of needed work to base estimations on. In the planning phase a work breakdown structure is also created and milestones set. That gives the needed clear goals for the execution phase.

Various stakeholders should have been included more in designing the change. Now, different RDE managers and personnel had been used for creating the processes. It focused on rather theoretical model of the work, how it should be performed. It didn't state what kinds of tools to be used or how the work is done in practice whatsoever. It wasn't necessary in this phase of the design. When the design of processes was completed, it should have been tested with various pilot cases in order to validate the theory in practice. Now the practical point of view was missing. There was no time to test the processes since they were needed in action by the end of 2011. The processes were introduced without discussion of the practicalities. It was hoped for that the practical problems would be addressed to in the local level. There were problems though, that needed to be handled on the division management level. The processes were to be implemented globally and there is also a project ongoing which aims to reduce the number of IT systems. Tools needed for handling the process systematically couldn't be purchased locally. There were also mentions of templates within the process task descriptions that are to be used globally and they were nowhere to be found.

These problems probably wouldn't have been surfaced if the processes were tested briefly with a theoretical case. They surfaced quite quickly after the first meeting were held by local deployment managers. The problem was the communication structure that was missing. Thus it is fairly easy to say that every level of organisation up until the local deployment management should have been included in planning the change on global level. This would have given explicit guidelines to base their own sub-plans on. The discussion of global boundaries, the musts and must-nots, should have been had. Majority of these issues stems from the problem of having scarce resources. The time limit for the changes didn't enable rigorous testing. There should have been time for discussing the focus of the change in more detail as the problems emerged. The missing task descriptions and templates were a result of sub-process owners' workload. The process owner himself couldn't supervise the implementations since he had to take on

another job in the organisation due to a saddening passing away of a fellow employee of his.

The question if change management and process thinking can be merged is answered to by incorporating the Cargotec Project Model into the change management. Projects, as Laamanen (2001, p. 27) has said are one off realisations of a process. They have similar proceedings and have common milestones. It wasn't fully planned as a process right from the top levels of the organisation. Yes, the main milestones were stated to be the different divisions and schedule formed accordingly. The divisions had not made plans separately. Local deployment managers have been in charge of doing the plans how to proceed with the changes. The actions done in Tampere follow the change management model presented in this thesis but the proceedings have been stalled in various parts due to lack of information. The problem stems from not making the choices and determining scope on the layers above local deployment managers.

Possibility for errors in this thesis comes from personal views and biases. Most of the work I've done has happened in the local deployment manager level. I've co-operated with sub-process owners and process owner as well. Not too much work has been done in co-operation with Division or I&T Management altogether during the implementation and its planning. To avoid these biases I've tried to openly discuss other possibilities for problems when presenting them. Most of the time the conclusion has been that there hasn't been enough time and resources for each of the local implementation projects in Tampere. Especially the Develop Concept and Develop New Products processes would have demanded more presence various stakeholders and quite much of their time. The lack of resources was verified also by the process owner.

I think one can't write without having some opinions about the subject but I've tried to stay as scientific as possible in trying to find out the root of the problems. It can't be said that the managers should have known better the information needs of the local deployment managers and their peers since projects like these haven't been conducted in the company. The problems stem from management not knowing or understanding the issues experienced by the local deployment managers. This is also local deployment managers' fault of not communicating with their project owner about the problems. But then again, the local deployment managers didn't ask for the change projects but were given them. The sub-process owners or local management didn't build up the momentum for the change to start up properly and catch local deployment managers' interest. The projects were written into their Personal Development Plans, though. The lack of interest is partly due to the project being out of the core competence area and the intangible problems it presents. Planning of changes is very much different from planning a new product development project, which is what the local deployment managers are good at.

6. CONCLUSIONS

The change management model (Figure 3.4) that was created during the literature research didn't realise during the thesis. It was approved though on behalf of the process owner, that the change project wound up in problems because the change wasn't handled as systematically as the model suggested. The model could not be tested during the research but will be tested in the future change projects within the company. Even though I participated in designing the approach to changes, I wasn't able to formalise the approach as I had intended in the model. Doing it only on the lowest level of the change structure didn't make smooth change possible. The lowest level would have either had total freedom to do as they please, as in emergent change or have clearly stated goals, as in planned change. Hypothetically the model should have answered to the problems that emerged if used properly. There were no formal reviews of progress of change and no clear procedure to change the approach.

Problems in managing change stemmed from inability to transform the greater vision to actual work. The vision was made clear for division management right in the beginning of the change management projects across Cargotec. The processes in more detail were presented for key-users and local management later. The next step was for local deployment managers to roll out the processes into daily work. This was when problems started to emerge. The knowledge of processes in the beginning was too vague. This was the phase when the vision should have been converted to practical solutions. The processes need to be implemented with a planned approach since the end result is well known. The end result wasn't unambiguously described by the process owner, sub-process owners or division management. They didn't even know fully the desired outcome themselves at this point. The end result should have been formed through rigorous communication between different divisions' local management and local deployment managers in order to gain enough knowledge to narrow the scope of the implementation in terms of tools, templates and work procedures to be used. Now, the responsibility of change management was handed down to local deployment managers too early.

The hierarchical structure of change management from I&T top management to local deployment managers wasn't established early enough. It wasn't clearly communicated either. The peers for each person participating in planning the change should have been known before starting the implementation. Through those peers the common understanding of the global or divisional end results could have been established and approved. After approving the more concrete end result separate plans could have been made. Now the approach was that local deployment managers created their own plans

which were reviewed by division management but their alignment with other divisions' plans wasn't reviewed. There were still decisions with global implications to be made. Thus, later on the local plans could be altered by aligning the plans to achieve certain results globally.

The lack of resources has been noted as one of the biggest hinderers of the process implementation in Port Cranes division. On one hand the claim is valid, but on the other the work done locally could have been critically reduced by setting clearer targets for the change. Whatever the reason, the problems as they emerged should have been communicated to the next hierarchical layer. The vision of one way of working was accepted in the organisation and on more practical level, the common processes were approved. There just seemed to be too much open ends in the processes and it working in practice from local deployment managers' point of view.

The model created during the thesis should be tested in a practical situation to be fully aware of its applicability. It doesn't identify itself as being suitable for only one type of change situation since it builds it base on top of theories of learning organisation. That means it must be adjusted to its context with efficient communication and flexibility. That is also one of the shortcomings of the model. If open and effective communication is not a central part of the organisation culture, the model is not able to achieve its purpose. The communication and leadership form the core of the change management model.

The research questions were answered partly in the theoretical part of the study and finally in the case study phase. The change management model needs to incorporate distinct phases for justifying, planning, executing and verifying the change. Leadership and communication bind those phases together. The model should also be flexible due to changing nature of the context the change is happening in and due to changing demands. The flexibility easily decreases the feeling of control during the change but it can be improved by having clear targets that are constantly reviewed, and limited number of persons for communication. The persons are chosen when mapping stakeholders. Stakeholder groups are those directly or indirectly affected by the change. One representing person is chosen for the change management team. Different hierarchical levels of organisation are needed as stakeholders in change management. Through having common targets in an organisation wide change, the end result is similar in different parts. In this case the end results needed to be similar up to a certain standard. The standard wasn't clearly set from the beginning and caused serious annoyance among the local change team. The change on the other hand can be planned and designed to proceed as a process, at least in theory. It wasn't tested during this research since the change process model created couldn't be realised.

For further research it is suggested that the model is tested in a real life situation and methods for effective communication are studied. Many of the problems were result of

poor communication. If the management knew about and really understood the issues of local deployment managers, something should have been done. The poor communication is partly local deployment managers', partly local management's responsibility and partly sub-process and process owners' as well.

The study achieved what it was set to do. A model for change management in Cargotec was created and it was approved by the party who ordered the study. It could not be tested in practice during the research but with the power of hindsight it was seen to cope with the problems the present approach ended up with. What was learned during the research though, was that the change in this scale can't be fully planned in advance and the vision by itself can't deliver good enough framework to make one way or working possible in all of corporation's functions. The vision is a good starting point to start a massive change like this and it allows better buy-in. The changes of this scale should also have more resources and the two-way communication should be more formal and repetitive in order to gain mutual understanding of possibilities and capabilities of different functions in an organisation. The two-way communication should reach all the way to where the change has been started in order to either describe the vision in more detail or change the desired outcome to be more easily achieved. Either way, a change like this should not be set in motion and assume it will achieve the outcome just as one has envisioned. It needs work, reviewing and redirecting continuously on all levels of organisation until the changes have reached their goal.

What should have been done differently is that a rigid structure for communication should have been established and continuously used. Now the structure was present but the information didn't flow. It was mainly due to the reason that the persons in charge weren't given enough time to devote for handling the change. A contingency approach to change demands massive amount of communication, since it is all about understanding the situation as good as possible in order to choose a correct method for the change. Now the change was set in motion with a rather unclear message. The message was that every part of organisation should work in very similar manner in the near future. The collaboration between different parts of organisation was minimal and the sub-process owners couldn't take the role to communicate the information between these parts. Trying to achieve similar way of working without knowing what the others did wasn't an easy task.

What I would have liked to see was rigorous communication in order to get these problems known to the top management. This would have solved the resource problem if it was taken seriously. Now it is unclear whether this information reached the management. If it did, nothing was done to correct the problems. If this was the case, the change was not needed hard enough in the top management's minds. Once it was understood by the local personnel, it was a hoped change in their minds. The company now failed to achieve the contingency approach to change and thus they didn't

understand why the initiative didn’t proceed amongst the local personnel. The change initiative wasn’t adapted to the real life situation and the approach wasn’t agile enough.

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APPENDIX 1: CALCULATING DICE SCORES

Calculating DICE Scores

Companies can determine if their change programs will succeed by asking executives to calculate scores for each of the four factors of the DICE framework—duration, integrity, commitment, and effort. They must grade each factor on a scale from 1 to 4 (using fractions, if necessary); the lower the score, the better. Thus, a score of 1 suggests that the factor is highly likely to contribute to the program's success, and a score of 4 means that it is highly unlikely to contribute to success. We find that the following questions and scoring guidelines allow executives to rate transformation initiatives effectively:

Duration [D]

Ask: Do formal project reviews occur regularly? If the project will take more than two months to complete, what is the average time between reviews?

Score: If the time between project reviews is less than two months, you should give the project 1 point. If the time is between two and four months, you should award the project 2 points; between four and eight months, 3 points; and if reviews are more than eight months apart, give the project 4 points.

Integrity of Performance [I]

Ask: Is the team leader capable? How strong are team members' skills and motivations? Do they have sufficient time to spend on the change initiative?

Score: If the project team is led by a highly capable leader who is respected by peers, if the members have the skills and motivation to complete the project in the stipulated time frame, and if the company has assigned at least 50% of the team members' time to the project, you can give the project 1 point. If the team is lacking on all those dimensions, you should award the project 4 points. If the team's capabilities are somewhere in between, assign the project 2 or 3 points.

Senior Management Commitment [C_1]

Ask: Do senior executives regularly communicate the reason for the change and the importance of its success? Is the message convincing? Is the message consistent, both across the top management team and over time? Has top management devoted enough resources to the change program?

Score: If senior management has, through actions and words, clearly communicated the need for change, you must give the project 1 point. If senior executives appear to be neutral, it gets 2 or 3 points. If managers perceive senior executives to be reluctant to support the change, award the project 4 points.

Local-Level Commitment [C_2]

Ask: Do the employees most affected by the change understand the reason for it and believe it's worthwhile? Are they enthusiastic and supportive or worried and obstructive?

Score: If employees are eager to take on the change initiative, you can give the project 1 point, and if they are just willing, 2 points. If they're reluctant or strongly reluctant, you should award the project 3 or 4 points.

Effort [E]

Ask: What is the percentage of increased effort that employees must make to implement the change effort? Does the incremental effort come on top of a heavy workload? Have people strongly resisted the increased demands on them?

Score: If the project requires less than 10% extra work by employees, you can give it 1 point. If it's 10% to 20% extra, it should get 2 points. If it's 20% to 40%, it must be 3 points. And if it's more than 40% additional work, you should give the project 4 points.

Executives can combine the four elements into a project score. When we conducted a regression analysis of our database of change efforts, we found that the combination that correlates most closely with actual outcomes doubles the weight given to team performance (I) and senior management commitment (C_1). That translates into the following formula:

DICE Score = $D + (2 \times I) + (2 \times C_1) + C_2 + E$

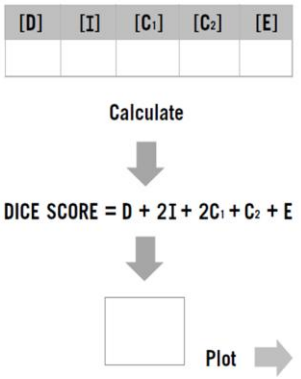
In the 1-to-4 scoring system, the formula generates overall scores that range from 7 to 28. Companies can compare a project's score with those of past projects and their outcomes to assess if the project is slated for success or failure. Our data show a clear distribution of scores:

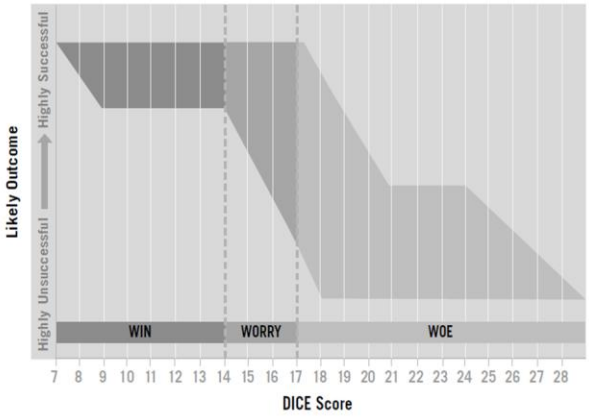
Scores between 7 and 14: The project is very likely to succeed. We call this the Win Zone.

Scores higher than 14 but lower than 17: Risks to the project's success are rising, particularly as the score approaches 17. This is the Worry Zone.

Scores over 17: The project is extremely risky. If a project scores over 17 and under 19 points, the risks to success are very high. Beyond 19, the project is unlikely to succeed. That's why we call this the Woe Zone.

We have changed the boundaries of the zones over time. For instance, the Worry Zone was between 14 and 21 points at first, and the Woe Zone from 21 to 28 points. But we found that companies prefer to be alerted to trouble as soon as outcomes become unpredictable (17 to 20 points). We therefore compressed the Worry Zone and expanded the Woe Zone.





To be used in conjunction with "The Process Audit" by Michael Hammer (HBR April 2007, Reprint R0704H).

How Mature Are Your PROCESSES?

You can evaluate the maturity of a business process and determine how to improve its performance by using this table. Decide how the statements defining the strength levels, from P-1 to P-4, for each enabler apply to the process that you are assessing. If a statement is largely true (at least 80% correct), color the cell green; if it is somewhat true (between 20% and 80% correct), shade the cell yellow; and if it is largely untrue (less than 20% correct), mark the cell red.

GREEN: largely true | YELLOW: somewhat true | RED: largely untrue

		P-1	P-2	P-3	P-4	P-1	P-2	P-3	P-4
Design	Purpose	The process has not been designed on an end-to-end basis. Functional managers use the legacy design primarily as a context for functional performance improvement.	The process has been redesigned from end to end in order to optimize its performance.	The process has been designed to fit with other enterprise processes and with the enterprise's IT systems in order to optimize the enterprise's performance.	The process has been designed to fit with customer and supplier processes in order to optimize interenterprise performance.				
	Context	The process's inputs, outputs, suppliers, and customers have been identified.	The needs of the process's customers are known and agreed upon.	The process owner and the owners of the other processes with which the process interfaces have established mutual performance expectations.	The process owner and the owners of customer and supplier processes with which the process interfaces have established mutual performance expectations.				
	Documentation	The documentation of the process is primarily functional, but it identifies the interconnections among the organizations involved in executing the process.	There is end-to-end documentation of the process design.	The process documentation describes the process's interfaces with, and expectations of, other processes and links the process to the enterprise's system and data architecture.	An electronic representation of the process design supports its performance and management and allows analysis of environmental changes and process reconfigurations.				
Performers	Knowledge	Performers can name the process they execute and identify the key metrics of its performance.	Performers can describe the process's overall flow; how their work affects customers, other employees in the process, and the process's performance; and the required and actual performance levels.	Performers are familiar both with fundamental business concepts and with the drivers of enterprise performance and can describe how their work affects other processes and the enterprise's performance.	Performers are familiar with the enterprise's industry and its trends and can describe how their work affects interenterprise performance.				
	Skills	Performers are skilled in problem solving and process improvement techniques.	Performers are skilled in teamwork and self-management.	Performers are skilled at business decision making.	Performers are skilled at change management and change implementation.				
	Behavior	Performers have some allegiance to the process, but owe primary allegiance to their function.	Performers try to follow the process design, perform it correctly, and work in ways that will enable other people who execute the process to do their work effectively.	Performers strive to ensure that the process delivers the results needed to achieve the enterprise's goals.	Performers look for signs that the process should change, and they propose improvements to the process.				
Owner	Identity	The process owner is an individual or a group informally charged with improving the process's performance.	Enterprise leadership has created an official process owner role and has filled the position with a senior manager who has clout and credibility.	The process comes first for the owner in terms of time allocation, mind share, and personal goals.	The process owner is a member of the enterprise's seniormost decision-making body.				
	Activities	The process owner identifies and documents the process, communicates it to all the performers, and sponsors small-scale change projects.	The process owner articulates the process's performance goals and a vision of its future; sponsors redesign and improvement efforts; plans their implementation; and ensures compliance with the process design.	The process owner works with other process owners to integrate processes to achieve the enterprise's goals.	The process owner develops a rolling strategic plan for the process, participates in enterprise-level strategic planning, and collaborates with his or her counterparts working for customers and suppliers to sponsor interenterprise process-redesign initiatives.				
	Authority	The process owner lobbies for the process but can only encourage functional managers to make changes.	The process owner can convene a process redesign team and implement the new design and has some control over the technology budget for the process.	The process owner controls the IT systems that support the process and any projects that change the process and has some influence over personnel assignments and evaluations as well as the process's budget.	The process owner controls the process's budget and exerts strong influence over personnel assignments and evaluations.				
Infrastructure	Information Systems	Fragmented legacy IT systems support the process.	An IT system constructed from functional components supports the process.	An integrated IT system, designed with the process in mind and adhering to enterprise standards, supports the process.	An IT system with a modular architecture that adheres to industry standards for interenterprise communication supports the process.				
	Human Resource Systems	Functional managers reward the attainment of functional excellence and the resolution of functional problems in a process context.	The process's design drives role definitions, job descriptions, and competency profiles. Job training is based on process documentation.	Hiring, development, reward, and recognition systems emphasize the process's needs and results and balance them against the enterprise's needs.	Hiring, development, reward, and recognition systems reinforce the importance of intra- and interenterprise collaboration, personal learning, and organizational change.				
Metrics	Definition	The process has some basic cost and quality metrics.	The process has end-to-end process metrics derived from customer requirements.	The process's metrics as well as cross-process metrics have been derived from the enterprise's strategic goals.	The process's metrics have been derived from interenterprise goals.				
	Uses	Managers use the process's metrics to track its performance, identify root causes of faulty performance, and drive functional improvements.	Managers use the process's metrics to compare its performance to benchmarks, best-in-class performance, and customer needs and to set performance targets.	Managers present the metrics to process performers for awareness and motivation. They use dashboards based on the metrics for day-to-day management of the process.	Managers regularly review and refresh the process's metrics and targets and use them in strategic planning.				

To be used in conjunction with "The Process Audit" by Michael Hammer (HBR April 2007, Reprint R0704H).

How Mature Is Your ENTERPRISE?

To determine if your organization is ready to support a process-based transformation, evaluate the statements in this table. They show the strength levels, from E-1 to E-4, of the capabilities that enterprises need in order to develop their business processes. If a statement is at least 80% correct, color the cell green; if it is between 20% and 80% correct, shade it yellow; and if it is less than 20% correct, make it red.

GREEN: largely true | YELLOW: somewhat true | RED: largely untrue

		E-1	E-2	E-3	E-4	E-1	E-2	E-3	E-4
Leadership	Awareness	The enterprise's senior executive team recognizes the need to improve operational performance but has only a limited understanding of the power of business processes.	At least one senior executive deeply understands the business process concept, how the enterprise can use it to improve performance, and what is involved in implementing it.	The senior executive team views the enterprise in process terms and has developed a vision of the enterprise and its processes.	The senior executive team sees its own work in process terms and perceives process management not as a project but as a way of managing the business.				
	Alignment	The leadership of the process program lies in the middle management ranks.	A senior executive has taken leadership of, and responsibility for, the process program.	There is strong alignment in the senior executive team regarding the process program. There is also a network of people throughout the enterprise helping to promote process efforts.	People throughout the enterprise exhibit enthusiasm for process management and play leadership roles in process efforts.				
	Behavior	A senior executive endorses and invests in operational improvement.	A senior executive has publicly set stretch performance goals in customer terms and is prepared to commit resources, make deep changes, and remove roadblocks in order to achieve those goals.	Senior executives operate as a team, manage the enterprise through its processes, and are actively engaged in the process program.	The members of the senior executive team perform their own work as processes, center strategic planning on processes, and develop new business opportunities based on high-performance processes.				
	Style	The senior executive team has started shifting from a top-down, hierarchical style to an open, collaborative style.	The senior executive team leading the process program is passionate about the need to change and about process as the key tool for change.	The senior executive team has delegated control and authority to process owners and process performers.	The senior executive team exercises leadership through vision and influence rather than command and control.				
Culture	Teamwork	Teamwork is project focused, occasional, and atypical.	The enterprise commonly uses cross-functional project teams for improvement efforts.	Teamwork is the norm among process performers and is commonplace among managers.	Teamwork with customers and suppliers is commonplace.				
	Customer Focus	There is a widespread belief that customer focus is important, but there is limited appreciation of what that means. There is also uncertainty and conflict about how to meet customers' needs.	Employees realize that the purpose of their work is to deliver extraordinary customer value.	Employees understand that customers demand uniform excellence and a seamless experience.	Employees focus on collaborating with trading partners to meet the needs of final customers.				
	Responsibility	Accountability for results rests with managers.	Frontline personnel begin to take ownership of results.	Employees feel accountable for enterprise results.	Employees feel a sense of mission in serving customers and achieving ever-better performance.				
	Attitude Toward Change	There is growing acceptance in the enterprise about the need to make modest change.	Employees are prepared for significant change in how work is performed.	Employees are ready for major multidimensional change.	Employees recognize change as inevitable and embrace it as a regular phenomenon.				
Expertise	People	A small group of people has a deep appreciation for the power of processes.	A cadre of experts has skills in process redesign and implementation, project management, communications, and change management.	A cadre of experts has skills in large-scale change management and enterprise transformation.	Substantial numbers of people with skills in process redesign and implementation, project management, program management, and change management are present across the enterprise. A formal process for developing and maintaining that skill base is also in place.				
	Methodology	The enterprise uses one or more methodologies for solving execution problems and making incremental process improvements.	Process redesign teams have access to a basic methodology for process redesign.	The enterprise has developed and standardized a formal process for process redesign and has integrated it with a standard process for process improvement.	Process management and redesign have become core competencies and are embedded in a formal system that includes environment scanning, change planning, implementation, and process-centered innovation.				
Governance	Process Model	The enterprise has identified some business processes.	The enterprise has developed a complete enterprise process model, and the senior executive team has accepted it.	The enterprise process model has been communicated throughout the enterprise, is used to drive project prioritization, and is linked to enterprise-level technologies and data architectures.	The enterprise has extended its process model to connect with those of customers and suppliers. It also uses the model in strategy development.				
	Accountability	Functional managers are responsible for performance, project managers for improvement projects.	Process owners have accountability for individual processes, and a steering committee is responsible for the enterprise's overall progress with processes.	Process owners share accountability for the enterprise's performance.	A process council operates as the seniormost management body; performers share accountability for enterprise performance; and the enterprise has established steering committees with customers and suppliers to drive interenterprise process change.				
	Integration	One or more groups advocate and support possibly distinct operational improvement techniques.	An informal coordinating body provides needed program management while a steering committee allocates resources for process redesign projects.	A formal program management office, headed by a chief process officer, coordinates and integrates all process projects, and a process council manages interprocess integration issues. The enterprise manages and deploys all process improvement techniques and tools in an integrated manner.	Process owners work with their counterparts in customer and supplier enterprises to drive interenterprise process integration.				